



# **IMPERIAL VALLEY COLLEGE 1983-1985**

welcomes you and wishes to take this opportunity to congratulate you on your decision to accept the challenge of further education. This catalog is your guide to and through this college and the many educational programs which it offers. In it you will find the information which you must have to succeed. In it also are those rules and regulations which govern not only the college, but you, the student, as well. It is your obligation to become thoroughly familiar with its contents. It has been prepared with your success in mind!

## **ANNOUNCEMENT OF COURSES**

**IMPERIAL COMMUNITY COLLEGE DISTRICT**

**P.O. BOX 158**

**Highway 111 and Aten Road**

**IMPERIAL, CALIFORNIA 92251-0158**

**Phone 619-352-8320**

**IMPERIAL COUNTY**

# **IMPERIAL VALLEY COLLEGE**

**ACCREDITED**

by

**Accrediting Commission for Junior Colleges  
Western Association of Schools and Colleges**

**The State Department of Education**

**National League for Nursing**

**American Welding Society**

**Commission on Peace Officers Standards and Training**

**A**

**MEMBER**

of

**California Association of Community Colleges**

**APPROVED**

for

**The Veterans Administration**

# TABLE OF CONTENTS

<b>COLLEGE CALENDAR</b> .....	<b>4</b>
<b>GENERAL INFORMATION</b> .....	<b>6</b>
Personnel .....	6
Location .....	12
History .....	12
Facilities .....	12
Library .....	12
Mission and Goals .....	13
Types of Courses and Programs .....	14
Evening College .....	14
External Campus .....	14
Work Experience Program .....	14
Honors Program for High School Students .....	14
Degrees .....	15
Scholastic Honors .....	15
Financial Assistance .....	15
Expenses .....	15
Refund Policy .....	16
Parking Permit .....	16
Accreditation .....	16
Counseling Services .....	16
Student Activities .....	16
Bookstore, Snack Bar and College Center .....	16
Athletics .....	16
<b>REGULATIONS</b> .....	<b>17</b>
Admission .....	17
Transcripts .....	17
Residence Requirements .....	17
Study List Limitations .....	18
Changes in Class Schedules .....	18
Scholarship Grading System .....	18
Semester Grade Reports .....	20
Probation .....	20
Provisional Status .....	20
Hearing Process .....	20
Attendance and Automatic Withdrawals .....	20
Withdrawal from College .....	20
Academic Dismissal .....	21
Physical Education .....	21
Changes in the Catalog .....	21
<b>GRADUATION REQUIREMENTS</b> .....	<b>21</b>
<b>CREDIT FOR CORRESPONDENCE AND EXTENSION COURSES</b> .....	<b>23</b>
<b>TRANSFER REQUIREMENTS</b> .....	<b>24</b>
<b>OCCUPATIONAL CURRICULA</b> .....	<b>24</b>
<b>COURSES OF INSTRUCTION</b> .....	<b>25</b>
<b>MAJORS</b> .....	<b>70</b>
<b>TEACHER PREPARATION</b> .....	<b>83</b>
<b>CERTIFICATE PROGRAMS</b> .....	<b>85</b>
<b>INDEX</b> .....	<b>91</b>

# IMPERIAL VALLEY COLLEGE 1983 - 1984 SCHOOL CALENDAR

**1983**

August	30	Tuesday	Faculty Service Day/Registrat
	31	Wednesday	Faculty Service Day/Registrat
September	1	Thursday	Faculty Service Day/Registrat
	2	Friday	Non-Service Day
	5	Monday	HOLIDAY (Labor Day)
	6	Tuesday	Fall Semester Classes Begin
November	11	Friday	HOLIDAY (Veteran's Day)
	24	Thursday	Recess (Thanksgiving)
	25	Friday	Recess (Thanksgiving)
December	19	Monday	Recess (Christmas)
	30	Friday	Last Day of Recess (Christma

**1984**

January	2	Monday	HOLIDAY (New Year's Day)
	19	Thursday	Final Exams Begin (Evening)
	20	Friday	Final Exams Begin (Day Clas
	25	Wednesday	Registration
	26	Thursday	Last Day of Final Exams/Reg
	27	Friday	Faculty Service Day
	30	Monday	Spring Semester Classes Be
February	13	Monday	HOLIDAY (Lincoln's Birthda
	20	Monday	HOLIDAY (Washington's Bir
April	16	Monday	Recess (Spring)
	20	Friday	Last Day of Recess (Spring)
May	28	Monday	HOLIDAY (Memorial Day)
	31	Thursday	Final Exams Begin (Evening
June	1	Friday	Final Exams Begin (Day Cla
	7	Thursday	Last Day of Final Exams
	8	Friday	Non-Service Day
	9	Saturday	Graduation

## IMPERIAL VALLEY COLLEGE DEADLINE DATES FALL SEMESTER 1983

September	4	Sunday	Residence Determination Date Fall Semester 1983
September	6	Tuesday	First Day of Classes
September	19	Monday	Last Day to Add or Register (End of 2nd Week)
September	26	Monday	First Census Day (Monday of 4th Week) Last Day to Apply for Tuition Refund
October	14	Friday	Last Day to Apply for Graduation and Certificates Last Day to Remove Incompletes for Spring 1983 (End of 6th Week)
November	14	Monday	Second Census Day (Monday of 11th Week)
December	9	Friday	Last Day to Drop with a "W" Grade (End of 14th Week)
January	19-26	Thurs. - Thurs.	Final Examinations
January	26	Thursday	Last Day of Fall Semester 1983

## SPRING SEMESTER 1984

January	29	Sunday	Residence Determination Date Spring Semester 1984
January	30	Monday	First Day of Classes
February	10	Friday	Last Day to Add or Register (End of 2nd Week)
February	20	Monday	First Census Day (Monday of 4th Week) Last Day to Apply for Tuition Refund
February	24	Friday	Last Day to Apply for Graduation and Certificates (End of 4th Week)
March	9	Friday	Last Day to Remove Incompletes for Fall 1983 (End of 6th Week)
April	2	Monday	Second Census Day (Monday of 10th Week)
May	11	Friday	Last Day to Drop with a "W" Grade (End of 14th Week)
May 31 - June 7		Thurs. - Thurs.	Final Examinations
June	9	Saturday	Graduation Day

## **THE BOARD OF TRUSTEES IMPERIAL COMMUNITY COLLEGE DISTRICT**

**MR. VICTOR CALDERON**

Trustee from area which includes Brawley Union High School District

**MR. MILTON W. CARR**

Trustee from area which includes Calipatria Unified School District

**MR. BILL COLE**

Trustee from area which includes Central Union High School District

**MR. CLEM MULLER, JR.**

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Trustee from area which includes Calexico Unified School District

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**MR. HOWARD WORTHINGTON**

Trustee from area which includes Imperial Unified School District

## **ADMINISTRATION**

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Superintendent-President

**MR. WILLIAM THORNBURG**

Vice President for Business Services/  
Deputy Superintendent

**DR. DALE GARES**

Vice President for Student Services

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**MR. STANLEY E. ALBERDA**

Dean of Learning Services

**MR. RUBEN LOPEZ**

Dean of External Campus

**MR. WILLIAM RUDOLPH**

Dean of Vocational-Technical Education

**MR. TERRY MORRIS**

Director of Student Life and Community Ser

**MR. JOSE SALAZAR**

Director of Financial Assistance & Placement

**MRS. ELLEN SAXE**

Director of Nursing Education & Health Tech

**MR. MEL WENDRICK**

Director of Physically Limited and Adaptive  
Learning Center

## DIVISION CHAIRPERSONS

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Chairperson of Division of Agriculture and Automotive Technology

**MR. GARY RODGERS**  
Chairperson of Division of Behavioral Science

**MR. BILL GRIFFIN**  
Chairperson of Division of Business

**MR. FRED FISCHER**  
Chairperson of Division of English

**DR. MAX FIELDS**  
Chairperson of Division of Health, Physical Education and Recreation

**MR. JACK FUESLER**  
Chairperson of Division of Humanities

**MRS. ELLEN SAXE**  
Chairperson of Division of Nursing Education and Health Technologies

**MR. JIMMY PENDLEY**  
Chairperson of Division of Science, Mathematics and Engineering

**MR. RICHARD HANN**  
Chairperson of Division of Social Science

## DIRECTORS AND COORDINATORS

**MR. GARY KOLLENBORN**  
Work Experience Coordinator/Director of Athletics

**MRS. ELLEN SAXE**  
Director of Nursing Education and Health Technologies

**MRS. BARBARA MACCI**  
Director of Early Childhood Programs

# THE FACULTY

**AKERS, H. RUSSELL**  
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**ALBERDA, STANLEY E.**  
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Psychology  
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M.A., Northern Arizona University

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M.A., California State University
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B.M., Westminster Choir College  
M.M., University of Southern California
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M.A., University of California
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- von WERLHOF, JAY  
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- WALKER, JAMES D.  
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- WASSON, HENRY S.  
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M.B.S., University of Colorado

**WENDRICK, MELVIN**

Director of Physically Limited and Adaptive Learning Center  
 B.A., Sacred Heart Seminary  
 M.A., University of Michigan

**WHITE, RAY A.**

Automotive Technology  
 Chairperson of Division of Agriculture and Automotive Technology  
 A.B., Fresno State College  
 M.A.V.E., Consortium of California State Universities and Colleges

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 B.S., M.A., St. Louis University

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 Ph.D., California Institute of Asian Studies

**WILSON, PATRICIA**

English  
 B.A., University of California

**EMERITUS FACULTY**

**HINSHAW, JOHN**  
 Mathematics  
 1942-73

**LEONARD, THOMAS**  
 Psychology  
 1964-72

**NOVAK, RUTH**  
 Counselor  
 1958-72

**UPSON, JOHN**  
 English  
 1966-77

**GARTIN, HERBERT**  
 Psychology  
 1966-78

**MOORE, ERNEST**  
 Business  
 1970-78

**SPENCER, TERREL**  
 Superintendent/President  
 1963-78

**BARKER, MICHAEL**  
 Anthropology  
 1968-79

**WHITE, HOWARD**  
 Law Enforcement  
 1969-79

**SWANN, MARIE**  
 English  
 1964-80

**WEISSMAN, HARRY**  
 English  
 1969-80

**OVERMAN, RUTH**  
 Business  
 1965-81

**BARKALOW, N.C.**  
 Law Enforcement  
 1974-81

**FINNEY, DEE**  
 Physical Education  
 1967-81

**FINLEY, LUTHER**  
 Engineering  
 1960-81

**GENTRY, GLENN A.**  
 Work Experience  
 1967-81

**SAMUELS, CARMEN**  
 Nursing  
 1971-81

**SAMSON, WALTER**  
 History  
 1963-82

**LEWIS, STANLEY H.**  
 Agriculture/Heavy Equip.  
 Mechanics  
 1969-83

**ANDERSON, LESLIE**  
 Law Enforcement  
 1967-83

# THE COLLEGE

## LOCATION

The Imperial Valley College is located in Imperial Valley, long recognized as one of the richest, most productive agricultural regions in the country. The mild, delightful winters have made the region attractive to tourists and helped it to become an outstanding recreational region.

The campus is located on a 160 acre site at the intersection of Highway 111 and Aten Road. This location is in the heart of Imperial County and is within reasonable commuting distance of all of the cities of the Valley.

## HISTORY OF IMPERIAL VALLEY COLLEGE

The Imperial Valley College is an integral part of the public school system of California and functions as a public community college for lower-division college work.

During its years of service to residents of Imperial Valley, the community college movement has grown from two small colleges, organized by two high school districts, to a county-wide community college district which serves seven high schools and unified school districts.

It had its beginning on May 9, 1922, when the Board of Trustees of the Central Union High School District of El Centro passed a resolution establishing the Central Junior College. This institution formally opened for instruction in September, 1922.

Two years later, in the fall of 1924, the Brawley Union High School District opened classes at the Brawley Junior College.

Enrollments increased in both schools until the war years, when attendance dropped sharply. Brawley Junior College was forced by lack of attendance to discontinue classes at the close of the 1947 school year.

Although enrollment dropped at Central Junior College, the institution continued to operate and after the war years steadily gained in attendance.

The Associate in Arts degree was first conferred by Central Junior College in 1934.

In the fall of 1951, students, in cooperation with the administration and faculty, petitioned the Board of Trustees for a more representative name for the college, for it was now serving students from all of the Imperial Valley. By action of the Board the name was officially changed to Imperial Valley College.

The school, under the administration of the Central Union High School District, gained recognition as an accredited institution of higher education. As the institution grew with the community, this growth was reflected in the steady rise in enrollment and in the diversity of courses and curricula that was offered.

The extended-day program, which offered regular college classes at night, was initiated on a limited basis in 1952. Its rapid growth served to enlarge the service of the college to the community.

An increasing number of students from other high school districts attended the college in El Centro, and it was felt that a county-wide community college district with a campus of its own could offer much more to the students and be of greater service to the entire Valley.

A recommendation that such a county-wide college district be established in Imperial County was submitted to the State Department of Education and approved on July 10, 1959. The County Superintendent of Schools then set a date for an election at which all voters residing within the boundaries of the school and unified school districts were eligible to vote. The election was held on October 6, 1959; an overwhelming vote of twelve to one, the Imperial Valley Junior College District was established. This was accomplished by the election of the members of the Junior College Board of Trustees, one of whom comes from each of the seven high school or unified school districts representing the area served by the Imperial Junior College District.

This District includes all of Imperial County except the area in the northwest corner of the County which is served by the Coachella Valley Community College District.

Because of the increase in enrollment at both the Brawley Union High School and the Imperial Valley College because of the lack of space on the campus of the Brawley Union High School in El Centro, the Imperial Valley College moved to temporary quarters erected on the campus of the Imperial Valley Union High School in Imperial, California.

On October 4, 1960, an all-time state record was set by the people of Imperial County when they voted thirteen to one in favor of bonds to finance the building of a new campus.

The Board of Trustees selected a national architectural firm to plan the new buildings, and a site which met the criteria recommended by the Board of Trustees was selected for the new campus.

On January 13, 1971, the Board of Trustees changed the name of the District to Imperial Community College in order to further emphasize the close relationship the college has with its service area.

## FACILITIES

On October 29, 1961, an impressive ground-breaking service was held for the new campus. Board members manned giant earth-moving equipment to break ground for the project. The new buildings include a library, laboratories, fine arts rooms, student activities center, academic classrooms, administration and faculty offices, social science rooms, physical education shower rooms, and agricultural education classrooms and a new campus opened in 1962.

A steady growth pattern began in April of 1962 with the addition of the multi-purpose building. The building was designed to house sporting and theater even though comparable to any such community college structure in the State. Three other projects followed which were made possible through community donations: The Janey Jackson Fountain, 1969; the renovation of the Historic Depot, located in the cactus garden, 1971; an Agricultural Center for Business and Commerce. The Meyer Center was dedicated February 20, 1972, at ceremonies commemorating the 50th anniversary of the Imperial Community College. Also recognized the same day was the opening of an archaeological museum at 442 Main Street in Imperial, buildings donated by H. P. Meyer and the new welding complex. The museum was later named the Michael Barker Museum, honoring Michael Barker, deceased, who was an IVC archaeology instructor.

Other building projects which followed were the Students Activities Building, 1971; the new Library Center, 1975, which was later named the Sp

Media Center, honoring Terrel Spencer, President Emeritus; the swimming pool complex, 1975; remodeling of the Student Union and the cafeteria into the College Center complex, 1977; and the preschool, 1981, which was constructed off Highway 111 on a section of the campus named Rider Park, honoring Amos R. Rider, deceased. Mr. Rider served as the first custodian and maintenance supervisor at the new campus in 1961. Additionally, a modernization of facilities to remove architectural barriers to the handicapped was completed in 1982.

On September 17, 1982, ceremonies were held to commemorate the 20th anniversary of the beginning of class instruction. From less than one thousand students a year in the early sixties, the college now enrolls approximately five thousand students each year.

### MISSION AND GOALS

The urban isolation experienced by Imperial Valley College has created the opportunity for the institution to become a leader in instituting a wide range of educational programs, services and innovations.

In view of this privileged role, the over-riding mission of Imperial Valley College is to serve our community today and in the future. We are both a leader for new ideas and a servant fulfilling the population's needs. Our offerings must reflect community interests and also present new ideas that will be of significance in the years ahead.

To fulfill this mission, we must know our constituency well. It is a unique one with highly diverse interests and educational backgrounds. The area is predominately agricultural with a large minority population, and statistically, it is a low economic sector with Imperial Valley College providing the best opportunity for advanced education and training for many of the residents.

As an educational institution, our primary responsibility is to offer high quality instruction with open access to all adults. Through our offerings, Imperial Valley College seeks to enrich the lives of our students, be it vocationally, academically, or avocationally. We must be sensitive to the individual and to his/her needs, with the belief that educated people build a strong community.

Our offerings must extend outside of the classroom. Through counseling, special programs, presentations and services, Imperial Valley College strives to contribute to the lives of as many citizens of Imperial County as possible/

The goals for Imperial Valley College are as follows:

1. **Provide quality teaching that is responsive and sensitive to the individuals served through the integrated efforts of all the staff.** The college exists for the benefit of the student and our programs must be relevant to his/her needs.
 

**PROCESS** - Close communication between departments, personal contact between staff and students, input by community and staff at all levels of operation, accessibility of services and personnel, diverse programs designed for a diverse population, staff training and sharing of ideas.
2. **Provide a quality vocational and professional education for students.** A major emphasis at Imperial Valley College is to equip the student with marketable skills and to allow members of the work force to upgrade their skills.
 

**PROCESS** - Two-year degree programs, certificate programs with specific focus, continuing education courses.

3. **Develop a well-rounded formal academic program.** Imperial Valley College offers an associate degree program comparable to that offered by colleges throughout the United States.
 

**PROCESS** - Staff commitment to high standards and intellectual development, strong transfer program with lower division courses, developmental program to prepare students for the mainstream of college work with special attention to students whose native language is not English, preparatory classes and learning aids for students deficient in educational skills.

4. **Provide enrichment and special interest programs.** Education offers a means to expand horizons and grow intellectually and spiritually. These special offerings may form part of a program or be ends in themselves.
 

**PROCESS** - Short-term programs, continuous courses in the arts and culture, encouragement of student presentations and participation, flexibility of schedules and course loads.

5. **Provide integrated support services for educational programs and student activities.** Successful education is more than time in a classroom; it is an integrated experience.
 

**PROCESS** - Strong counseling program, laboratories that supplement class work, a full-service library, creative and supportive student activities personnel, open cooperation and communication between areas.

6. **Provide services to the community at large.** As a leading educational institution, Imperial Valley College recognizes a responsibility to go beyond the campus and the course.
 

**PROCESS** - Special cultural and informational presentations open to all, entertainment, availability of resources and facilities, exchange of ideas and information with community groups, wide publicity of events and services.

7. **Maintain high standards through assessment, development, evaluation, improvement, and accountability.** The commitment to excellence is an ongoing process. To fulfill its many responsibilities, our college must be current with its community and dedicated to improving its services.
 

**PROCESS** - Timely needs surveys and community input, encouragement of substantiated development, meaningful evaluations of all aspects of the college program and subsequent improvements, accountability in pursuing our goals efficiently.

8. **Prepare students to make contributions, through knowledge, to the quality of life in the Imperial Valley.** Education creates opportunities and makes choices possible. Improvement of self-concept heightens respect for others and for the environment. Ultimately, it builds a solid community, a strong nation, a better world.
 

**PROCESS** - Diverse offerings that serve the needs of our diverse community, honesty and respect for all involved, dedication to instilling high ideals and standards.

**TYPES OF COURSES AND PROGRAMS**

In order that Imperial Valley College may achieve its goal of serving all students who desire to learn, a variety of courses are offered. Some will equip a student with job entry-level skills and other courses provide general education for all students to assist them in living meaningful and productive lives in a complex society. Still other types of courses provide the basis for professional training offered by four-year colleges and universities.

Regardless of the interests of the students, the first two years of college work normally can be completed at Imperial Valley College. Thus students have an opportunity to begin their advanced education while still residing at home. Not only can this opportunity be of great financial assistance, but it offers an excellent transition between the high school campus and the large, often impersonal, four-year college campus. The intimate, though scholarly, atmosphere of the college; the opportunity for each student to know instructors personally; and the chance to participate in the counseling program; all offer invaluable opportunities to the student that might not be available in an institution where the very size of enrollment makes personal interest in every student more difficult. Not only can the student receive excellent personal assistance with work, but the opportunities for leadership in student affairs are increased.

Through the counseling program, a close scrutiny is given to the courses in which a student enrolls. The student plans ahead, sets up goals and systematically includes those courses of study that will be of the greatest benefit.

Many of the needs of the student who seeks employment at the end of the sophomore year can be met by a variety of occupational courses. In addition to offering a breadth of education, they meet specific needs in the shortest possible time to prepare the student for a field of employment.

These courses also offer a well organized general education program to meet the needs of the individual who has only two years to devote to post-high school education.

The community college program also includes courses of study which may be taken by adults who can demonstrate their ability to do college work but who have not had the opportunity to complete high school. Evidence of success in classes of college level will permit these adults to continue their educational endeavors.

Coordinated with the general divisions of courses at the college are four programs designed with specific types of students in mind: students who can devote only evenings to school; students who cannot fully participate in regular classes on the main campus; students who can coordinate their college study with a program of employment; and the outstanding high school 11th and 12th grade students who can profit by special work at the college level.

**1. The Evening College**

The Evening College, composed of regular college classes that meet at night, offers an opportunity to work for the Associate in Arts degree or Associate in Science degree, to complete regular lower-division work in a four-year program, to make up any high school deficiencies, or simply to take additional classes of interest that will add to general education.

Although evening college programs require more time to complete than the day programs, students find that with adequate planning and the assistance of a counselor, they are able to attain their higher education goals in a surprisingly short time.

**2. The External Campus**

The External Campus is an outreach effort of Imperial Valley College for coping with the geography of Imperial Valley, employment, family responsibilities, personal circumstances that make it difficult for students to participate in regular classes on the main campus.

Short-term courses are offered at various locations during the academic year. The classes are held at satellite locations throughout the Imperial Valley as an effort to bring classes to people in their communities.

**3. Cooperative Work Experience**

Cooperative Work Experience is a cooperative program between Imperial Valley College and community employers. The college provides the organization, the coordination of classes, and the personnel for the program. The employers provide places to work (work stations) and on-the-job training which has educational value for the student. Units of credit earned may be used to meet the requirements of a certificate or a degree.

**4. Attendance of Local High School Students**

Local high school students attending the college through the Honors or Vocational programs are restricted to the spectator's role in college student activities. Curricular participation is to be confined to the high school. Counseling is available at the college level. An effort will be made to leave this responsibility to the high school counseling staffs.

Students must be authorized for attendance at the college to receive appropriate college credit. High school Honors or Vocational classes may be negotiated.

Students must attend high school for the full school day.

**Admission of 11th and 12th Grade High School Students**

The president of any two-year community college may admit to the community college as a special part-time student any 11th or 12th-grade high school student whose admission is recommended by the principal of the high school. A principal of a high school may recommend a high school student as a special part-time student pursuant to rules and regulations which may be adopted by the governing board of the district maintaining the high school. A principal of a high school may recommend a number of high school students not to exceed 15 percent of the total number of 11th and 12th grade students enrolled in the high school at the time of recommendation.

The student is authorized attendance at the college as a special part-time student pursuant to the section and shall receive credit for community college courses completed in the same manner as a student enrolled at the community college unless, by agreement between the two districts, the student may receive high school credit for the course completed.

Each special part-time student shall attend high school for at least the minimum school day.

**Admittance of Pupil Who Has Completed Summer Session: Crediting Summer Session**

The president of any two-year community college may admit to the summer session of the community college as a special student any high school student who has completed the 11th grade and whose summer session is recommended by the principal of the high school in which the student completed the summer session.

grade. A principal of a high school may recommend such a student as a special student pursuant to rules and regulations which may be adopted by the governing board of the district maintaining the high school. A principal of a high school shall not recommend a number of students who have completed the 11th grade in excess of 5 percent of the total number of students in the high school who have completed the 11th grade immediately prior to the time of recommendation.

The attendance of a student at community college as a special summer session student pursuant to this section shall be credited to the district maintaining the community college for the purposes of allowances and apportionments from the State School Fund and the student shall receive credit for community college courses completed, in the same manner as if a regularly enrolled community college student. (E.C. 76002)

**5. Physically Limited Program**

The Physically Limited Program is designed to provide supportive services to students with physical disabilities, learning disabilities and health problems. The program provides preferential registration, counseling, class scheduling, tutoring, mobility assistance, interpreting, braille transcribing, adaptive physical education, special parking and nursing assistance.

**DEGREES**

The Board of Trustees, on recommendation of the president and faculty of the college, is authorized in accordance with Article 12, Section 102, of the State Administrative Code, Title 5, to confer the Associate in Arts (A.A.) and the Associate in Science (A.S.) degrees. Conditions under which the degrees are granted are outlined in the section on graduation requirements.

The community college degree is awarded to a student who fulfills a two-year organized program of work, either of an occupational-vocational-technical type or of a lower-division four-year college type. A student who wishes to transfer to the upper division of a four-year college must satisfy the course, unit, and grade requirements of the college he/she wishes to enter.

**SCHOLASTIC HONORS  
Graduation Honors**

"With Distinction" is accorded those graduates who in the course of their entire college work have achieved a grade point ratio of 3.5 or higher.

"With Honors" is granted to those graduates who achieve a grade point ratio of 3.0 in their college work.

**President's Honor List**

The president of the college gives special recognition to top scholars each semester by publishing a list of students whose grades for the previous semester show a 3.0 average or better in twelve or more units of work.

**Alpha Gamma Sigma**

**Initial Membership:** A person may attain initial membership if the person has:

1. Completed 12 semester units in a maximum of 3 semesters and has
2. A cumulative grade point average of 3.25. No units acquired more than two years prior to application for initial membership shall be used prohibitively.

**Continuing Membership.** An initial member may attain continuing membership by:

1. Achieving for the previous semester not less than a 3.25 GPA in courses of recognized college standing, or
2. Maintaining a cumulative GPA of 3.25 or better in courses of recognized college standing.
3. Continuing members will receive one semester's grace for every semester of earning continuing membership. If the continuing member's GPA falls below 3.25 but remains above 2.5 (either per semester or cumulative), he may apply one semester's grace earned to maintain continuing membership for the semester the earned GPA would apply. There shall be no two consecutive grace periods.

**Permanent Member.** Any person who has completed a minimum of 60 units of recognized college courses with a minimum of 30 units completed at a community college who applies for permanent membership and who meets either of the following requirements:

1. A person who has maintained a cumulative grade point ratio of 3.5 or above in all recognized college work.
2. Any continuing member who has maintained a cumulative GPA of 3.25 or better in all recognized college work and has been a member of AGS, Inc., for a minimum of two semesters.

Any courses completed two years prior to application for permanent membership, whether at a community college or other institution of higher education, shall not be used to prohibit any person from becoming a permanent member.

**FINANCIAL ASSISTANCE**

Imperial Valley College believes that no student who has the ability to profit from instruction should be denied an education due to a lack of financial means.

There are several types of aid available to needy, deserving students each year. This assistance is made available by the college district, the state and federal governments, civic groups, and individual citizens.

The college participates in available federal financial aids programs.

In addition to the federal programs, there is aid available from the state and the local district in the form of scholarships, work-study grants, and loans.

Further information regarding financial assistance may be secured from the Financial Assistance and Placement Services Office located in the Counseling Center.

**EXPENSES**

All Fees and Tuition are due and payable at the time of registration. Registration in courses WILL NOT be finalized until the college has received full payment.

**FEEES**

**Main Campus Fees**

Instructional Materials Fee	Refer to Class Schedule
Parking Services/Transpor. Fee	\$18.00
Student Service Fee	\$ 7.00

**Off Campus Fees (For Students enrolled solely in off-campus classes)**

Instructional Materials Fee	Refer to Class Schedule
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**EXPLANATION OF FEES**

An **Instructional Materials Fee** is charged in each course

and is based upon current anticipated expenditures for consumable supplies and materials used. Specific fees are listed in the class schedule.

**Parking Services/Transportation Fee** provides administrative and operating funds for parking and transportation-related facilities.

**Student Service Fee** provides use of non-academic facilities and funds to enhance the quality of student life on campus. Refundable upon request.

### TUITION

There are no tuition fees for California residents. Non-residents and international students are required to pay tuition charges of \$72.00 per unit in addition to the fees outlined above.

The College will accept payment from non-resident and international students in cash, Western Union money orders, traveler's checks and bank drafts. Personal checks cannot be accepted. Payment of non-resident and international student tuition cannot be deferred.

### OTHER FEES/CHARGES

#### Late Registration Fee

A Late Registration Fee (\$2.00) is charged to all students registering after the close of the regular registration period.

#### Non-Sufficient Funds Check Charge

There will be a charge of \$10.00 for checks returned to the college because of insufficient funds.

#### REFUND POLICY

Upon completion of refund request form, reimbursement in full will be made for the following:

1. Fee or tuition collected in error
2. Fee or tuition for a discontinued class

A student refund request form must be completed and filed prior to the close of late registration in order to receive reimbursement for the following:

1. Tuition
2. Instructional Materials Fee
3. Parking Services/Transportation Fee
4. Student Service Fee

#### PARKING PERMIT

**ALL** vehicles parked on campus must have a valid parking permit. If you will be bringing a vehicle to campus, please complete the vehicle registration form available in the registration packet.

#### ACCREDITATION

The college is officially accredited by the Accrediting Commission for Junior Colleges, Western Association of Schools and Colleges, National League for Nursing, American Welding Society, the State Department of Education and the Commission on Peace Officers Standards and Training. The University of California and other colleges and universities give full credit for transfer courses completed here.

#### COUNSELING AND GUIDANCE SERVICE

It is the aim of Imperial Valley College to provide all students with pertinent information which they will need in the formulation of their goals and objectives and to assist them in making the most of their potentialities and training. Counseling is made available by professional counselors, well-skilled and trained in the areas of academic, vocational, and personal counseling. The Counseling Center is open between the hours of 8:00 a.m. and 9:00 p.m., Monday

through Thursday, and 8:00 a.m. and 5:00 p.m. on Friday. The Career Center is located in the Counseling Center and provides extensive vocational and career information.

Although counselors assist in long-range planning and checking specific requirements, THE RESPONSIBILITIES FOR MEETING GRADUATION REQUIREMENTS FOR TRANSFER TO OTHER COLLEGES OR UNIVERSITIES MUST BE ASSUMED BY THE STUDENT. In the Counseling Center students have access to a reference library of catalogs from various colleges and universities.

### STUDENT ACTIVITIES

Student affairs are governed by the Associated Students of Imperial Valley College.

Those students who are socially inclined will find an opportunity for the development of their interests and the social affairs of the year. Others who are interested in athletics will benefit from a variety of intercollegiate activities and those who are interested in music, public speaking, and student government will find many opportunities for participation in these activities.

### BOOKSTORE AND COLLEGE CENTER

The college bookstore is maintained by the Associated Students through a lease arrangement with a private contractor. College textbooks and necessary supplies are available at the College Center Building contains a snack and coffee bar which provides refreshments and meals for the students.

### ATHLETICS

Intercollegiate competition is held in baseball, basketball, football, soccer, softball, tennis, volleyball and wrestling. IVC competes in the Pacific Coast Conference in all sports except football. Pacific Coast Conference includes San Diego State, MiraCosta, Palomar, Saddleback, San Diego State, Diego Mesa and Southwestern Colleges. Antelope Valley College of the Desert, Grossmont, Mt. San Jacinto and Bernardino Colleges make up the Foothill Conference. Our football competition.

### LEARNING SUPPORTIVE SERVICES

Learning supportive services are designed to provide extensive programs for remediation and enrichment and to offer courses designed for the student mastery of study skills and learning techniques. Assistance services are also available in the Learning Supportive Services Center, and the Imperial Valley College Tutors Club provides many academic enrichment opportunities for students interested as tutors. In addition, language services exist for students with limited English-speaking ability and who desire academic assistance in linguistic areas in their courses.

The Learning Supportive Services Center has a large amount of audiovisual equipment and media. It has an inventory of slides, tapes, filmstrips, records, overhead projectors, kits, and other instructional learning materials. The center presents the broad subject range of courses on campus. An extensive videocassette library has been developed which provides students with an opportunity to view educationally relevant television broadcast programs and pictures.



# REGULATIONS

## ADMISSION

Admission to Imperial Valley College is governed by the laws of the State and such supplementary regulations as prescribed by the Board of Trustees. Students who register for eight or more units of work in a given semester or upon an accumulation of eight or more units, are required to (1) ensure that an official transcript of all work taken in high school and/or institutions of higher education are on file in the Registration Office; and (2) complete the college placement tests (unless they have completed regular college courses in both English and mathematics).

All students are admitted under one of the following classifications:

1. High school graduates or equivalent certificates (General Educational Development or California High School Proficiency Examination)
2. Non-graduates of high school who are eighteen years of age.
3. High school students who are recommended by the high school principal for one to nine units of work. (Must submit a Concurrent Enrollment Form). Extracurricular participation is to be confined to the high school. These students must attend high school for the minimum school day.
4. College transfers who submit official transcripts (high school and college) may be granted advanced standing.
5. Prospective foreign students and students from other states may be accepted for enrollment. A tuition fee will be charged. Contact the Registration Office for current costs.

## TRANSCRIPTS

Imperial Valley College furnishes two free transcripts. Thereafter, a fee of \$2.00 is charged for each additional transcript. Requests for transcripts will not be honored until all outstanding obligations to the College are met.

## FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT OF 1974

All educational records of students who enroll at Imperial Valley College are kept in accordance with the provisions of the Family Educational Rights and Privacy Act of 1974.

The following information will be available in the Admissions and Counseling offices on each enrolled student: name, address, telephone, birthdate, registration number, list of classes and section numbers, instructors, units, room numbers, hours in which the student is enrolled, dates of attendance, activities participated in and degrees awarded. Any student who does not wish his or her name included on this listing must file a petition requesting deletion from the list before the opening of the school term.

For additional information or a copy of the entire law, contact the Vice President for Student Services in the Administration Building.

## AFFIRMATIVE ACTION POLICY

The District adopted an Affirmative Action Plan in 1973. The Plan was revised in 1979 and in 1981. The establishment and development of the Plan demonstrates the District's commitment to affirmative action and equal employment opportunities for all employees and prospective employees. The Plan is available in the Spencer Library Media Center, the Superintendent's office and the Affirmative Action officer's office.

## NON-DISCRIMINATION POLICY

Imperial Valley College does not discriminate in the admission nor in the offering of programs and activities because of race, color, religion, age, marital status, national origin, sex, or handicap.

## RESIDENCE REQUIREMENTS

Each person enrolled in or applying for admission to a California community college is, for purposes of admission and tuition, classified as a "district resident" or a "non-resident."

Students classified as State of California residents will be admitted to the College without payment of non-resident tuition. Students classified as non-residents will be required to pay tuition in an amount set by the governing board.

1. A State of California resident is a person who has resided within California for at least one year and a day prior to the term of enrollment.
2. A "non-resident" student is one who does not have residence in the State of California for more than one year and a day prior to the term of enrollment.

Residency requires physical presence in California with an intent to make one's home here.

Examples of evidence that aid the college admissions officer in identifying that intent, but which are not individually decisive, are possession of a document of California origin such as a driver's license, a current utility bill, a receipt for registration to vote, a current lease, rental agreement or rent receipt showing the student's name and address and place of residence, a library card, last year's state and federal income tax information, a current charge account or credit, or a checkbook.

Any one or a combination of these gives some indication to the admissions officer of the student's intent. Possession of the necessary intent coupled with the durational requirement of one year will satisfy the residency requirements, and the student may be classified as a resident student.

Unmarried minors (those under 18 years of age) are by law incapable of establishing their own residence, notwithstanding their physical presence within California. An admissions officer will use the following guidelines for the determination of a minor applicant's residence:

If the minor's parent father is living, the residence of the father is the residence of the minor. If the father is not living, the residence of the natural mother is the residence of the minor. If the natural mother has remarried, and she has not established her own residence following such marriage, the residence of the step-father is the residence of the minor. In cases of adoption or guardianship where either natural parent is not living, the residence of the adopting parent or the guardian is the residence of the minor.

Persons under eighteen whose parents are not living and who do not have legal guardians may establish their own residence. However, students who are minors and have parents living may not by their own act establish residence, nor will the appointment of a guardian or the relinquishment of the parent's right of control give minors the ability to establish their own residence.

Exceptions to the determination of residency as set forth above may be applied to certain factual situations. If students would otherwise be classified as non-residents, but fit within one of the following exceptions, they may be granted resident classification until they obtain such classification.

## Exceptions may be granted for:

- a. Minors who remain in California after their parents, who had previously resided within California, but moved from the state prior to the resident classification.
- b. Minors who have been self-supporting and in California for one year preceding the day before the term will be granted resident classification.
- c. Students who have not been adults for more than one year prior to the resident determination date may add their pre-18-years-of-age residence to their post-18-years-residence to obtain the durational requirements.
- d. A child or a spouse of a member of the armed forces stationed in California will be granted resident classification. A person who is a member of the armed forces not assigned to California for purposes of education may be entitled to resident classification for a period of one year. During that year, the person must establish a residence or the individual will be subject to non-resident tuition for any subsequent enrollment.
- e. Adult aliens lawfully admitted for permanent residence and present for one year will be given resident classification. Minor aliens may use parents' durational presence to satisfy the one-year requirement.

Aliens who hold the following classification are to be able to establish residence using the same criteria as would be applied when evaluating any United States citizen:

- a. Career Diplomat Visa
- b. Foreign Investor Visa
- c. International Treaty Organization
- d. Foreign Press Visa
- e. Fiance Visa
- f. Refugees
- f. A student holding a valid credential authorizing service in a public school and employed in a certificated position by a community college district will be given resident classification.
- g. A student who is an apprentice within the meaning of Section 3077 of the Labor Code is entitled to resident classification.
- h. A student who is a full-time employee of a California institution of public higher education or whose parent or spouse is a full-time employee may be granted resident classification at the option of the institution of enrollment.
- i. A student may be classified as a district resident if he lives with a parent who earns a livelihood primarily by performing agricultural labor for hire in California and other states and the parent has performed such labor in this state for at least two months per year in each of the two preceding years, the parent lives within the district which maintains the community college attended by the student, and the parent claims the student as a personal dependent on his state or federal personal income tax returns if he has sufficient income to have a personal income tax liability.
- j. A student may be classified as a district resident if he earns a livelihood primarily by performing agricultural labor for hire in California and other states and he has performed such labor in this state for at least two months per year in each of the two preceding years.

## STUDY LIST LIMITATIONS

A regular full-time program is 12 to 18 units. of 15 to 16 units must be taken to graduate in four semesters.

The maximum load allowed for students is 18 units including an activity course in physical education. Exceeding this rule will be made by special permission of the Registrar (through the petition process) when there is evidence of successful scholastic performance.

A student who is currently enrolled in another college (including correspondence school or independent study) must report this enrollment to the Registrar. The total number of units carried during a semester of college work may not exceed the 18 unit limit.

## CHANGES IN CLASS SCHEDULES

When registering, it is expected that a student's registration schedule shall not be completed on a trial basis. Before, students are expected, at the time they file for registration, to make no further change. If a change must be made, students may add classes within a designated period beginning of each semester. Changes will be made by obtaining an add card and approval of the Registrar, then filing with the Registration Office.

## SCHOLARSHIP GRADING SYSTEM

Grades are based upon the quality of work done and upon actual accomplishment in courses offered. Grades showing the standing of students are issued at the end of each semester.

An overall grade point average of 2.0 (C) or higher must be earned in all work undertaken.

## 1. GRADES

- A Superior
- B Better Than Average
- C Average
- D Below Average
- F Failing
- I Incomplete

UNFINISHED WORK, OTHERWISE PASSING that (because of medical or other serious illness or an important assignment such as a final examination, or experiment is mis-

An incomplete (I) grade, which is not met by the end of the sixth week of the next regular semester shall be converted to a letter grade. The letter grade shall be used in computing grade point average.

## 2. CREDIT GRADE

Certain courses designated by the appropriate authority may be taken for a Cr grade. Students must notify the instructor by the sixth week of the semester.

- a. Cr will reflect a letter grade of C or better.
- b. NC will reflect incompleteness of a credit grade.
- c. Cr grades are permissible in the student's program at Imperial Valley College if permitted by the division or department.
- d. Students applying for Cr must adhere to the class standards or regulations as a student in a regular grade.

- e. A maximum of 16 units taken on a credit basis may be applied toward a degree.
- f. The Cr grade will satisfy completion of prerequisite for sequence class.

3. WITHDRAWAL GRADES

W—Withdrawal

A student may withdraw from any course or from the college during the semester by obtaining the signature of the instructor on a drop card and filing the drop card in the Registration Office.

Any instructor may withdraw a student during the first fourteen weeks for excessive absences or for disciplinary reasons.

Grades at the time of withdrawal under either circumstances will be assigned in accordance with the following schedule:

Weeks of Semester	Grade
1 through 14	W
15 through 18	other than a W

All withdrawals are official after being processed by the Registrar's Office. Instructors may file a drop card with or without the student's signature through the 14th week of the semester and it will be processed. Beginning with the second class meeting, through the 14th week of the semester, students will also have the opportunity to file a drop card and it will be processed. A drop card filed by a student will be valid with or without the instructor's signature. If the instructor's signature does not appear, the instructor will be notified by the Registrar's Office.

The "W" will normally be given to the student during the 1st through the 14th week of the semester. The student shall be given a letter grade other than a "W" after the 14th week.

Students will be allowed to withdraw from a class or classes in extenuating circumstances after the last day of the 14th week (or 75 percent of the term, whichever is less) upon petition of the student or his/her representative after consultation with the instructor(s).

Extenuating circumstances are verified cases which are clearly beyond the control of the student, i.e. documented cases of serious accident, serious illness, or transfer of a student by military order.

4. REPEATED CLASSES

Procedure for Repeated Classes:

- a. A student wishing to repeat a class in which a grade of D or F was received must complete a NOTICE OF REPEATED CLASS CARD. This card must be returned to the Registrar's Office prior to the completion of the repeated class; otherwise, the student must go through the regular Student Petition process.

The Registrar's Office will process Repeated Class cards and approved Student Petitions so that grade, units and grade points of the original class will not be used in computing total units and grade point averages.

- b. Under special circumstances, a student may repeat a course for which a grade of C or better has been recorded. Repetition of these courses is permitted through the Student Petition process. Grades awarded for courses repeated under this provision shall not be counted in calculating a student grade point average.

5. GRADE POINTS

Grade points, per semester unit, are assigned as follows:

- A—4 grade points per unit
- B—3 grade points per unit
- C—2 grade points per unit
- D—1 grade point per unit
- F—0 grade points per unit
- Cr—0 grade points per unit; units not charged against the student
- NC—0 grade points per unit; units not charged against the student
- I—0 grade points per unit; units not charged against the student
- W—0 grade points per unit; units not charged against the student

The grade point average is computed by dividing total grade points earned by total units attempted. Thus in any given semester, if the grade points earned total 28 and the total units attempted equals 14, the grade point ratio is 2.00

6. CREDIT BY EXAMINATION

An enrolled student may petition to take an examination in lieu of course work between the sixth and fourteenth weeks of each semester. A maximum of 25 units may be used toward graduation through this process. No more than 15 units per semester will be authorized. The fee will be \$20.00 per unit plus \$10.00 for administrative costs for each examination administered. The credit by examination petition is available in the Registration Office.

7. ADVANCED PLACEMENT - NURSING

Students with previous nursing education and/or work experience may be eligible for advanced placement in the nursing curriculum. Evaluation is done on an individual basis by the nursing faculty. Details are available in the Nursing Office.

8. MILITARY CREDIT

**A Guide to the Evaluation of Educational Experiences in the Armed Services, American Council on Education**, is used to evaluate military school credit.

- a. Presentation of the DD214 by petition may allow the veteran 6 units of credit for basic training (4 units for physical education and 2 units for health education).
- b. Additional military credit will be considered by petition and presentation of proper documentation.
- c. Total number of units of military credit is not to exceed 16.

9. CREDIT FOR UPPER DIVISION COURSE WORK

Upper division credit may not be applied toward an Associate Degree. The only exception is the credit received for an upper division course which is also offered as a lower division course.

10. ACADEMIC RENEWAL

If a student returns to Imperial Valley College after five years of absence, he may petition for the exclusion of any given semester's work. If any part of a semester's work is to be excluded, the entire semester's work must be excluded with respect to grades, units and course requirements. Once a semester has been excluded, it may not be reinstated.

**SEMESTER GRADE REPORTS**

An end-of-the-semester grade report is issued to each student by the Registration Office after the semester's work has been completed.

**STUDENT CONDUCT**

It is assumed that the entry of a student into Imperial Valley College constitutes the student's acceptance of the Standards of Student Conduct and the regulations published by the college. The Standards may be found in the Handbook for Faculty Advisors and Student Leaders, which is available in the Office of Student Life and Community Services.

**ACADEMIC PROBATION**

Academic Probation is a system of monitoring student progress in order to identify students who are experiencing difficulty in making satisfactory progress toward an appropriate educational objective, and providing special assistance to students in reassessing their educational objectives and guiding them to accomplish these goals.

Students who are placed on probation will be identified as early as possible at the termination of each semester and will be referred to the Counseling Center.

There are two types of Academic Probation:

**Scholastic Probation**

Any student who completes more than six units in any semester and earns less than a 2.00 grade point average will be placed on Scholastic Probation. A student will remain on Scholastic Probation until the student's grade point average is 2.00 or better.

**Lack-of-Progress Probation**

At the end of each semester, any student who has accumulated a recorded enrollment in 15 or more units may not receive more than 50 percent of those units in non-academic grades (W, NC) and will be placed on Lack-of-Progress Probation until the completed units are 50 percent or more of the student's recorded enrollment.

**PROVISIONAL STATUS**

A newly enrolled freshman who is enrolled in more than six units and who falls into one of the categories listed below shall be admitted on provisional status:

1. Grade point average in the last three years of high school was less than 2.0 (grade C on a five-point scale with zero for an F grade) excluding only physical education and military science.

- A = 4.0
- B = 3.0
- C = 2.0
- D = 1.0
- F = 0

2. Student is not a high school graduate.

Students on provisional status shall develop, with a counselor, a course of study commensurate with their ability. They are required to hold periodic conferences with a counselor and their program may be regulated by a counselor according to their aptitudes and achievement.

Provisional status is removed when students have successfully completed 12 units of work.

**PETITION AND HEARING PROCESS**

Formerly and currently enrolled IVC students to seek and receive responses to any question their educational programs in accordance with Community College District educational philosophy.

**Petition Process**

The petition process is used to request exceptions to rules and regulations in order to meet the student's needs or circumstances.

**Petition Procedure**

The student will use a petition form (available in the Registration Office and Counseling Center) and submit requests to the Vice President for Student Services. The Vice President will review the request and provide a resolution. If the student is not satisfied with the resolution, a request may be made to the Vice President for Student Services for a hearing by the appropriate committee.

**Hearing Process**

There are three established areas which may require hearing procedures for students and campus organizations in response to educational questions or issues:

1. Standards of Student Conduct
2. Access to Student Records and Challenge Procedure
3. Grievance Procedure Policy in Matters of Non-Discrimination

**Hearing Procedure**

Students and campus organizations are required to summarize their concerns or issues in writing and submit them to the Vice President for Student Services. A designated coordinator of the hearing procedure will be assigned.

**ATTENDANCE AND AUTOMATIC WITHDRAWAL**

A student who fails to attend the first meeting of a class will be dropped by the instructor immediately from the class. Should readmission be desired, the student will be the same as that of any other student who adds a class.

Regular attendance in all classes is expected of students enrolled. Instructors are expected to take attendance record into account in computing the student's grade. A student may be excluded from further attendance during any semester when absences after the first meeting have exceeded the number of class hours per week. Further, an instructor may judge a student to be a disturbing element in the classroom.

A student who is tardy three times may be having been absent once. Absences attributed to the college at officially approved events and contests and attendance upon field trips are not counted as absences.

**VOLUNTARY WITHDRAWAL**

A student who is required to withdraw from a course because of extenuating circumstances must contact the Registration Office for the procedures to be followed for voluntary withdrawal grades."

**ACADEMIC DISMISSAL**

Academic Dismissal is a system of forced interruption in attendance at Imperial Valley College in those instances where a student is unable to maintain satisfactory progress in achieving academic programs within the limit of available resources of the college.

Students are subject to the following two types of academic dismissal:

**Scholastic Dismissal**

Scholastic Dismissal occurs at the end of the Spring semester when a student has previously been placed on Scholastic Probation, and has completed 30 or more units with a grade point average of 1.75 or less. The student will not be allowed to enroll during the next semester or the current summer session (except by special approval upon petition to the Admission, Registration and Petitions Committee).

**Lack-of-Progress Dismissal**

Lack-of-Progress Dismissal occurs at the end of the Spring semester when a student has previously been placed on Lack-of-Progress Probation, and has accumulated a recorded enrollment of 30 or more units, and more than 50 percent of those units are non-academic grades (W, I, NC). The student will not be allowed to enroll during the next semester or current summer session (except by special approval upon petition to the Admission, Registration and Petitions Committee).

**PHYSICAL EDUCATION**

Students under 21 years of age and registered for more than eight units shall be required to register and pass a physical education activity class each semester for four semesters (a maximum of four P.E. activity classes is required).

Exemptions may be granted for:

1. Physical disability (medical excuse required)
2. Age, twenty-one or over
3. Postgraduate standing
4. Completion of basic or recruit training in any of the Armed Forces of the United States

Students in physical education activity classes are required to dress appropriately. Appropriate dress for activity classes include tennis shoes, shorts, sweat pants or jogging apparel and tee shirts or a similar top for vigorous activity.

Students who fail to enroll or are dropped by their instructor from a physical education activity class will be required to reduce their class load to eight units or less.

**CHANGES IN THE CATALOG**

Any regulation adopted by the administration of Imperial Valley College shall have the same force as a printed regulation in the catalog and shall supersede, upon appropriate public announcement, any ruling on the same subject which may appear in the printed catalog or official bulletins of the college.

A student may be graduated under the catalog in effect at the time of initial enrollment provided a continuous enrollment status is maintained during each semester (excluding summer sessions).

# GRADUATION REQUIREMENTS

**ASSOCIATE DEGREES**

Upon the completion of the following requirements, students at Imperial Valley College will be granted the degree of Associate in Arts or Associate in Science, depending upon the major completed. Responsibility for filing a petition for graduation rests with the student. This petition is to be filed with the Registrar not later than the end of the 6th week of the fall semester, the 4th week of the spring semester and the 1st week of summer session. A \$5.00 non-refundable fee must accompany the petition for graduation.

Students may participate in the graduation ceremony once. A student may get one Associate in Arts diploma and one Associate in Science diploma. Additional majors completed may be posted to the permanent record.

The requirements for graduation represent State and institutional minimum general requirements as well as the firm commitment on the part of Imperial Valley College to the principles of general education. These requirements in general education are designed to develop the potential of every student, broaden their outlook, and contribute to the realization of the well-balanced whole person.

**I. ACQUISITION OF MAJOR CONSISTING OF EIGHTEEN UNITS (UNLESS OTHERWISE DESIGNATED) IN A SPECIFIED FIELD OF STUDY**

Students may satisfy the major requirement in the following fields of study. Individual courses of study for each major are listed after the Courses of Instruction.

- A.S.—Agricultural Business
- A.S.—Agricultural Chemical Technology
- A.S.—Agriculture Mechanics
- A.S.—Animal Science
- A.A.—Anthropology
- A.A.—Art
- A.S.—Automotive Body Repair and Painting
- A.S.—Automotive Technology
- A.S.—Banking—Administrative Services
- A.S.—Banking—Credit Administration
- A.S.—Banking—Secretarial
- A.S.—Banking—General Operations
- A.A.—Behavioral Science
- A.S.—Bilingual-Bicultural Studies
- A.S.—Bookkeeping
- A.A.,A.S.—Business Supervision
- A.A.,A.S.—Business Transfer
- A.S.—Carpentry
- A.A.—Cinematography
- A.S.—Cosmetology
- A.A.,A.S.—Data Processing
- A.A.,A.S.—Early Childhood Education
- A.S.—Engineering
- A.A.—English
- A.S.—Fire Science
- A.A.—Foreign Language
- A.A.,A.S.—General Business
- A.A.,A.S.—General Major
- A.S.—General Office Technician
- A.A.,A.S.—General Science

- A.A.—Gerontology
- A.A.—Governmental Management
- A.S.—Graphic Arts
- A.A.—Human Relations
- A.A., A.S.—Individual Interdisciplinary
- A.S.—Industrial Power Technology
- A.A.—Journalism
- A.S.—Law Enforcement
- A.A.—Legal Assistant
- A.A.—Liberal Studies (Elementary Teacher Preparation)
- A.A., A.S.—Life Science
- A.S.—Machinery Operation and Maintenance
- A.A., A.S.—Marketing—Sales Technology
- A.A., A.S.—Mathematics
- A.A.—Medical Office Assistant
- A.A.—Music
- A.S.—Nursing (Associate Degree-Registered)
- A.S.—Nursing (Licensed Vocational)
- A.S.—Physical Education
- A.A., A.S.—Physical Science
- A.S.—Plant Science
- A.S.—Recreation
- A.A.—Rehabilitation Technician for the Physically Limited
- A.A., A.S.—Secretarial
- A.A., A.S.—Social Science
- A.S.—Soils and Water Technology
- A.A.—Teacher Aide
- A.S.—Water Treatment Technology
- A.S.—Welding Technology

**II. UNITS, GRADE POINT AVERAGE, RESIDENCE AND FINANCIAL OBLIGATIONS REQUIREMENTS**

- A. Sixty (60) units plus physical education if required.
- B. Grade point average of 2.0 or better for all college work.
- C. Completion of a minimum of forty-five (45) units in residence, or completion of at least the last fifteen (15) units at Imperial Valley College.
- D. Settlement of all financial obligations to the college.

**III. INSTITUTIONAL REQUIREMENTS**

- A. American Institutions (select one sequence)
  - 1. Hist 17A & Hist 17B
  - 2. Poly Sci 1 & Poly Sci 2
  - 3. Hist 17A & Poly Sci 1
  - 4. Hist 17B & Poly Sci 2
  - 5. Soc Sci 52
- B. Health Education: HE 1 or HE 3 (Veterans only)
- C. Physical Education, if required.

**IV. STATE COMPETENCY REQUIREMENTS**

- A. Math Competency: Satisfactory score on Placement Test or choose one: AG 50, AT 50, Math 50, PL 50, Weld 50 or Math 51.
- B. Reading Competency: Satisfactory score on Placement Test or Eng 12B.

**V. GENERAL EDUCATION**

A minimum of eighteen (18) semester units, including a minimum of three (3) semester units in each of the first three areas or divisions (a, b, c) and the same minimum in each part of d. The remainder of the unit requirement

(3 units) is also to be selected from among areas or divisions (a, b, c, and d) as determined by the student's option.

A general education course may be used to satisfy a general education requirement and a major requirement.

a. Natural Science (3 units required)

- Ag 14 Entomology
- Anat 6 Human Anatomy & Physiology
- Anat 8 Human Anatomy
- Anat 10 Human Anatomy & Physiology
- Anthro 1 Physical Anthropology
- Astron 21 Elementary Astronomy
- Bio 3 Principles of Biological Science
- Bio 21 General Microbiology
- Bot 1A General Botany
- Chem 1A General Inorganic Chemistry
- Chem 2A Introduction to Chemistry
- Env Sci 5 (also Ag 5) Man & His Environment
- Geog 1 Physical Geography
- Geol 1A Physical Geology
- Geol 10 Life of the Past: An Intro. to Paleontology
- Geol 11 General Geology: An Intro. to Geology
- Geol 12 Intro. to Historical Geology
- Geol 14 General Paleontology, Dinosaurs, and Sabretooths & Man
- Nat Sci 51 Survey of the Earth Sciences
- Phy Sci 25 Intro. to Physical Science
- Phys 2A General Physics
- Phys 4A Principles of Physics
- Physio 1 Human Physiology
- Zool 1A General Zoology
- Zool 10 Life of the Past: An Intro. to Paleontology

b. Behavioral & Social Science (3 units required)

- Anthro 2 Cultural Anthropology
- Anthro 3A Intro. to Archaeological Sites
- Anthro 3B Intro. to Archaeological Excavations
- Anthro 4 California Indians
- Anthro 5 Archaeology: Theory, Prehistory, and Laboratory
- Anthro 6 Indians of North America
- Anthro 7 Classic Civilizations of Prehistoric Meso-America
- Anthro 8 Indians of the Southwest
- ECE 20 (also Psych 20) Developmental Psychology of Children
- ECE 21 (also Psych 21) Early Childhood Education: Children, Family & Community
- ECE 22 (also Psych 22) Principles of Child Development and Observation
- ECE 34 Infants and Toddlers
- Econ 1 Principles of Economics
- Econ 2 Principles of Economics
- Geog 2 Cultural Geography
- Geog 3 Economic Geography
- Hist 10 History of Modern Russia
- Hist 30 Mexican and the American Southwest
- HR 9 (also Psych 9) Interview and Counseling
- PL 1 (also ECE 27 & Psych 27) Understanding Exceptional Children
- Poly Sci 3 Comparative Politics
- Poly Sci 14 Intro. to International Relations
- Psych 1A General Psychology
- Psych 1B Advanced General Psychology
- Psych 2 Intro. to Physiological Psychology
- Psych 3 (also TA 3) Psychology of Social Adjustment
- Psych 5 Psychology of Effective Behavior

GRADUATION REQUIREMENTS

- Psych 14 Abnormal Psychology
- Psych 17 (also Soc 17) Social Psychology
- Psych 30 Psychology of Adolescence
- Psych 35 Developmental Psychology
- Psych 46 (also LE 46) The Mentally Ill, Alcoholic, Drug Addict & the Law
- Soc 1 Principles of Sociology
- Soc 2 Contemporary Social Problems
- Soc 33 Marriage and the Family
- Span 40 (also Hist 40) Civilization of Spain & Portugal
- Span 41 (also Hist 41) Civilization of Spanish America and Brazil
- Span 43 History & Culture of the Philippines

c. Humanities (3 units required)

- Art 3A/3B History & Appreciation of Art
- Art 4 History & Appreciation of Modern Art
- \*\*Art 30A Introduction to Art
- Drum Art 5A/5B History of World Drama
- Eng 1B Introduction to Literature
- Eng 41 Survey of American Literature
- Eng 42A/42B Survey of World Literature
- Eng 43A/43B Survey of English Literature
- Eng 44AF Literature for Appreciation
- Eng 45AF Studies in Literature
- +Eng 46A/46B (also Span 28A/28B) The Mexican American in Literature
- Eng 47 Intro. to the Bible as Literature
- Eng 54 (also Hum 54/MPP 54) Intro. to Film History and Criticism
- Fr 1 Elementary French
- \*\*Fr 1A/1B Elementary French
- Fr 2 Elementary French
- \*\*Fr 2A/2B Elementary French
- Fr 3 Intermediate French
- Fr 4 Intermediate French
- Fr 10 Intermediate Conversational French
- Fr 11 Intermediate Conversational French
- \*\*Fr 20A/20B French Drama - Reading and Performance
- Fr 40 (also Hum 40) Intro. to French Civilization and Culture
- Fr 41 (also Hum 41) Intro. to French Civilization & Culture Beyond France
- Ger 1 Elementary German
- Ger 2 Elementary German
- Ger 10 Conversational German
- Ger 11 Conversational German
- Hist 4A/4B History of Western Civilization
- Hum 1A/1B Man and the Arts
- Hum 25 The Humanities
- Hum 26 The Humanities
- \*\*Ital 1A/1B Elementary Italian
- \*Mus 17AF Chamber Singers
- \*Mus 18AF Chamber Orchestra
- Mus 20A/20B History & Literature of Music
- Mus 30 Intro. to Music Literature & Listening
- Phil 1A/1B Introduction to Philosophy
- Phil 11 Ethics
- Phil 25 Religions of the Modern World
- Ph 5 (also Jrn 5) Intro. to Photography
- PL 10 Beginning Communication with the Deaf
- PL 11 Intermediate Communication with the Deaf
- PL 12 Advanced Communication with the Deaf
- Span 1 Elementary Spanish
- \*\*Span 1A/1B Elementary Spanish
- Span 2 Elementary Spanish
- \*\*Span 2A/2B Elementary Spanish
- Span 3 Intermediate Spanish
- Span 4 Intermediate Spanish

- \*\*Span 5A/5B Beginning Conversational Spanish and Culture
- Span 10 Intermediate Conversational Spanish
- Span 11 Advanced Conversational Spanish
- Span 20A/20B Bilingual Spanish
- Span 21 Intermediate Bilingual Spanish
- Span 22 Advanced Bilingual Spanish
- Span 23 Bilingual Oral Spanish
- Span 24 Intro. to Spanish Literature
- Span 25 Intro. to Spanish American Literature
- +Span 42 Intro. to Mexican American Studies
- \*\*Span 54A/54B Beginning Conversational Spanish for Careers

d. Language and Rationality

1. English Composition (3 units required)
  - Eng 1A Reading & Composition
  - or
  - Eng 2B Basic English Composition
2. Communication & Analytical Thinking (3 units required)
  - Bus 50 Intro. to Data Processing
  - Bus 52 Computer Programming I
  - Bus 55 (also Math 47) Programming in Fortran
  - Bus 57 (also Math 57) Programming in Basic
  - Eng 11 Reading IV: Analytical & Critical Reading
  - Eng 50 Advanced Composition
  - Eng 51 The Communication Process
  - Eng 52 Intro. to Linguistics
  - Eng 53A/53B Creative Writing
  - Eng 55 Intro. to Technical & Report Writing
  - Jrn 1 Intro. to Journalism
  - Jrn 3 Mass Communication
  - Math A Intermediate Algebra
  - Math C Plane Trigonometry
  - Math 2 Advanced Algebra & Trigonometry
  - Math 3A Analytic Geometry & Calculus
  - Math 10 Mathematics for Elementary School Teachers
  - Math 12 (also Psych 12/Bus 26) Elementary Statistics
  - Math 17 (also Bus 9) Mathematics for Business Analysis
  - Math 18 Intro. to Mathematics
  - Phil 10 Logic
  - Sp 1 Oral Communication
  - Sp 11 Oral Interpretation - Readers Theatre
  - Sp 30 Voice and Articulation Development

- +Ethnic Studies Course
- \*1 Unit Course
- \*\*2 Unit Course

**CREDIT FOR CORRESPONDENCE AND EXTENSION COURSES**

A student may petition to have a maximum of six units of credit counted toward graduation for correspondence or extension courses which meet the following standards:

1. Courses must have been taken from a recognized accredited college or university having a correspondence or extension division.
2. Courses must be designated as recommended for lower division credit by the college or university.

It is the responsibility of the student to submit evidence establishing the above standards.

# TRANSFER REQUIREMENTS

Two principal requirements must be met in order to attain full junior standing at a state university, the University of California, or other institutions maintaining equivalent standards to which the student expects to transfer. These are as follows:

1. The completion of the specified requirements for junior standing in the proposed senior college or university; and,
2. The completion of the lower-division prerequisites for upper-division majors and minors.

These vary according to the requirements of the institution of higher education in which the student expects to enroll. A STUDENT EXPECTING TO TRANSFER TO SUCH AN INSTITUTION SHOULD CONSULT THE CATALOG OF THE INSTITUTION REGARDING SPECIFIC REQUIREMENTS and plan their Imperial Valley College work so that these requirements will be met. Additional information is available in the Counseling Center.

A student planning to transfer to the California State University system can, at their request, have the general education requirements certified by Imperial Valley College. In order to meet this certification, a student must complete thirty-nine (39) units of selected general education in one of five areas: English communication and critical thinking; physical universe and its life forms; arts, literature, philosophy and foreign language; social, political and economic institutions; and understanding life and self development. With the certification of general education completed by Imperial Valley College, a student can transfer to a California State University assured that no further general education will be required in the lower division area. For further information regarding the necessary courses required for general education certification, contact the Counseling Center.

## Transfer Credit

In state universities, and at the University of California, a maximum of 70 semester units earned in a community college may be applied toward the Bachelor's degree, with the exception that no upper division credit may be allowed for courses taken in a community college and no credit may be allowed for professional courses in education taken in a community college. Many other colleges and universities also allow credit for 70 units of lower division work completed at a community college.

# OCCUPATIONAL CURRICULA

Imperial Valley College has developed career programs which reflect employment opportunities of our county and region. Advisory committees work closely with the college to assure each student the best in education and real employment opportunities upon graduation.

In developing a major program, each student should plan on completing graduation requirements for the Associate in Arts or Associate in Science Degree. It is recommended that students should plan a broad educational background including general education courses.

It is most important that students consult with advisors during their first semester in preparing programs to determine the appropriate sequence of courses. Further, it should be noted that the final responsibility for the proper courses rests with the student.

## CERTIFICATES

Occupational Certificates are awarded to students who demonstrate that well-defined levels of proficiency have been achieved in designated occupational fields. Certificate programs are available in some of the occupational areas for which the college offers the Associate Degree. To qualify for an Occupational Certificate, a student must:

1. Complete all courses listed for a particular certificate.
2. Achieve a "C" grade average (2.0 GPA) for the courses used to complete the certificate.
3. File a certificate petition with the Registrar no later than the end of the sixth week of the fall semester, the fourth week of the spring semester and the second week of the summer session.

## Certificates are offered in the following areas:

Field Archaeology  
Automotive Body Repair and Painting  
Automotive Technology  
Banking  
Administrative Certificate in Bank Operations  
Credit Administration Certificate in Bank Operations  
General Certificate—Bank Service  
Secretary Certificate—Bank Service  
Business  
Bookkeeper Technician  
Clerk Typist  
Office Technician: (Receptionist, File Clerk, Small Business Recorder)  
Secretary/Stenographer  
Carpentry  
Cosmetology  
Early Childhood Education  
Electronics  
Emergency Medical Technician  
Fire Science  
Gerontology  
Governmental Management  
Graphic Arts—Multi Media  
Printing  
Health Aide  
Community Health Aide  
Developmental Disability/Mental Retardation Aide  
Hospital Nursing Assistant  
Mental Health Aide  
Heavy Machinery  
Human Relations  
Community Mental Health Worker  
Counseling, School and Social Services  
Personnel, Employment Counseling and Supervision  
Law Enforcement  
Legal Assistant  
Library Technician—Basic  
Marketing-Sales Technology  
Recreation  
Rehabilitation Technician for the Physically Handicapped  
Teacher Aide  
Vocational Nursing  
Water Treatment  
Welding  
Work Experience-Occupational



# COURSES OF INSTRUCTION

In the following list of courses, the credit value of each course in semester units is indicated by a number in parentheses after the course number.

To make it possible for a greater number of courses to be offered to the students of Imperial Valley, many courses in specialized fields are offered on alternate years only. The student should take this into consideration when making long-range program plans.

Course numbers followed by an AB sequence indicate that the course may be taken more than once, covering the same materials, to gain proficiency in the subject matter. Course numbers which have an A and B sequence with different course descriptions indicate that new or advanced materials are to be covered.

The prerequisites for any course may be waived by the instructor and the Dean of Instruction.

Unless specifically exempted by statute, every course, course section or class, the average daily attendance of which is to be reported for state aid, wherever offered and maintained by Imperial Community College District, shall be fully open to enrollment and participation by any person who has been admitted to the college and who meets such prerequisites as may be established pursuant to Chapter II, Division 2, Part VI, Title 5 of the California Administrative Code commencing with Section 51820 (Board of Trustees Resolution No. 5682).

## SUMMER SESSION (When Offered)

Summer Session calendar and admission requirements may be found in the Summer Session Bulletin or Schedule of Classes which is published during the Spring Semester.

## AGRICULTURE

Many of the courses in the field of agriculture are offered on alternate years only. Students should keep this in mind as they plan their long-range programs of study with the assistance of their counselors.

**AG 5 (3)**  
**MAN AND HIS ENVIRONMENT**  
3 Hrs. Lec.  
(Same as Env Sci 5)

**AG 14 (3)**  
**ENTOMOLOGY**  
2 Hrs. Lec. 2 Hrs. Lab.  
A basic study of insects with emphasis on classification, anatomy and physiology, and ecology. An insect collection is required.

**AG 20 (3)**  
**ANIMAL SCIENCE**  
1 Hrs. Lec.  
A survey of the sources of the world's supply of animal products. The distribution of and factors influencing domestic animals in the United States. The origin, characteristics, and adaptation of the important breeds and the influence of environment upon their development. Selection, feeding and management of sheep, swine, and cattle on California farms.

**AG 21 (3)**  
**FEEDS AND FEEDING**  
1 Hrs. Lec.  
The basic principles of animal nutrition as they are applied to livestock feeding; the composition and use of feedstuffs in

their relation to feeding of farm animals; ration balancing. Identification and classification of feeds, methods of preparing feeds; relative value for each class of livestock. Digestion and utilization of feeds; feeding standards; economy in feeding; vitamins and minerals and feed sources.

**AG 22 (3)**  
**LIVESTOCK SELECTION**  
2 Hrs. Lec. 2 Hrs. Lab.  
Selection of beef cattle, sheep, swine and horses according to breed, type and use. The animal form in relation to its various functions. Studies of recognized type standards in livestock with a critical evaluation of the criteria used in establishing these standards. Correlation of the type of the live animal with the quality of the carcass.

**AG 23 (3)**  
**ANIMAL DISEASES**  
3 Hrs. Lec.  
The symptoms, diagnosis and treatment of animal diseases.

**AG 24 (3)**  
**HORSE HUSBANDRY**  
3 Hrs. Lec.  
Status of the horse industry; types and breeds; selection, care and management and economics of the light horse; their place and use in California and the United States.

**AG 25 (3)**  
**AGRICULTURAL BUSINESS MANAGEMENT**  
3 Hrs. Lec.  
Changes occurring in agriculture, careers in commercial agricultural business and public agricultural service

agencies, development and growth of farm-related industries, kinds of agricultural businesses, operational characteristics of commercial agricultural industries.

**AG 26 (3)**  
**AGRICULTURAL BUSINESS ORGANIZATION AND MANAGEMENT**  
3 Hrs. Lec.  
Study of farm technological advance, marketing, consumer demand and other such factors as determinants of growth, types and forms of agricultural business organization. Farm and farm related businesses considered from standpoint of primary functions, services and problems including investments, mortgage and working capital requirements, credit and collections, business with banks, failures and reorganization. Emphasis on California farm-related industries.

**AG 27 (3)**  
**AGRICULTURAL SALES AND SERVICE MANAGEMENT**  
3 Hrs. Lec.  
Supervision of people who sell agricultural products and services. Selecting, training, directing and evaluating personnel. Methods of payment, use of advertising, promotion, incentives and service.

**AG 28 (5)**  
**HEAVY EQUIPMENT OPERATION AND MAINTENANCE**  
3 Hrs. Lec. 6 Hrs. Lab.  
(Same as H.M. 35)

**AG 32 (3)**  
**IRRIGATION AND DRAINAGE**  
**2 Hrs. Lec. 2 Hrs. Lab.**

Fundamental principles and practices of irrigation. Soil-moisture relationships, water measurement, methods of irrigation, crop requirements, farm irrigation structures. Pumps and pumping and problems of the irrigation farmer. Land preparation and irrigation methods, problems of irrigation, crop requirements, farm irrigation structures including investigation of drainage problems. Types of drainage systems and layout of farm drains, and drainage requirements for land reclamation and irrigated agriculture.

**AG 33A (5)**  
**FARM POWER**

**3 Hrs. Lec. 6 Hrs. Lab.**

For the student with little or no automotive background. Design, construction and mechanical function of automobile engines including lubricating, cooling, fuel and electrical systems; clutches; and an understanding of the basic sciences relevant to such topics as internal combustion and energy conversion. A materials fee will be charged. (Same as Auto Tech 51)

**AG 33B (5)**  
**FARM POWER**

**3 Hrs. Lec. 6 Hrs. Lab.**

Prerequisite: AG 33A or 2 years of high school auto mechanics. Review and advanced study of the internal combustion engine and service procedures in the use of automotive machine shop tools and machines for rebuilding the engine. A materials fee will be charged. (Same as Auto Tech 55)

**AG 33C (5)**  
**FARM POWER**

**3 Hrs. Lec. 6 Hrs. Lab.**

(Same as Auto Tech 63)

**AG 35 (4)**  
**FLUID POWER**

**3 Hrs. Lec. 3 Hrs. Lab.**

A study of the principles and laws governing fluids. The design and function of hydraulic and pneumatic components, seals, fluid types, circuits and symbols. Latest developments in the control and transfer of energy and its relationship to agricultural technology. A materials fee will be charged. (Same as Auto Tech 57)

**AG 36 (3)**  
**AGRICULTURAL CONSTRUCTION**  
**2 Hrs. Lec. 2 Hrs. Lab.**

A study of the materials and processes most suited to farm situations. Practical concrete design, farm layout and fabrication.

**AG 37 (3)**  
**SMALL GASOLINE ENGINES**  
**2 Hrs. Lec. 2 Hrs. Lab.**

The history, design, construction and mechanical function of the small gasoline engine, including tune-up and major repair of the electrical and mechanical systems. A materials fee will be charged. (Same as Auto Tech 59)

**AG 38 (3)**  
**POWER ELECTRICITY**  
**2 Hrs. Lec. 2 Hrs. Lab.**

Fundamentals of electric wiring; circuit layout and problems, motor and branch circuit protection, safe use of electricity, motor maintenance, wiring buildings and homes.

**AG 39 (5)**  
**DIESEL ENGINE REPAIR**  
**3 Hrs. Lec. 6 Hrs. Lab.**

(Same as HM 40)

**AG 40 (3)**  
**SOILS**  
**3 Hrs. Lec.**

Physical, chemical and biological properties of soils as related to agriculture. Principles of soil-plant inter-relations; development of the soil as a natural body, soil moisture, effect of management practices on soil properties; composition and use of fertilizers.

**AG 41 (3)**  
**FERTILIZERS**  
**3 Hrs. Lec.**

The nature of fertilizers and soil amendments, their properties, methods of application, and reaction upon soils and plants. Composition, value and use of fertilizer materials and soil correctives. Methods employed in the manufacture, distribution, and application of fertilizers.

**AG 42 (4)**  
**PLANT SCIENCE AND FORAGE CROPS**

**3 Hrs. Lec. 3 Hrs. Lab.**

Principles and practices of crop improvement, propagation, production, processing, storage, and marketing. Production, harvest and utilization of principal California forage crops. Field laboratory work required.

**AG 43 (4)**  
**FIELD AND CEREAL CROPS**  
**3 Hrs. Lec. 3 Hrs. Lab.**

Principles and practices of field and cereal crops production and soil management, including study of distribution, adaptation and utilization of the major field

and cereal crops. Field laboratory work required.

**AG 44A (2)**  
**VEGETABLE GARDENING**  
**COOL WEATHER**  
**6 Hrs. Lab.**

Organic and inorganic vegetable gardening. Cultural practices, harvesting, grading and marketing, disease and insect control. California vegetable crops.

**AG 44B (2)**  
**VEGETABLE GARDENING**  
**WARM WEATHER**  
**6 Hrs. Lab.**

Organic and inorganic vegetable gardening. Cultural practices, harvesting, grading and marketing, disease and insect control. California vegetable crops.

**AG 45 (3)**  
**VEGETABLE PRODUCTION**  
**3 Hrs. Lec.**

Principles involved in vegetable crop production, including selection, value, harvesting, packing and marketing of the major truck crops of California.

**AG 46 (3)**  
**ORNAMENTAL PLANT IDENTIFICATION AND CULTURE**  
**3 Hrs. Lec.**

Identification, growth habit and ornamental use of houseplants, groundcovers, annuals and small shrubs adapted to the southern valleys of California.

**AG 47 (3)**  
**NURSERY PRACTICES**  
**2 Hrs. Lec. 3 Hrs. Lab.**

A general course in ornamental nursery culture with emphasis on production. Includes nursery structure, seeding, transplanting, propagation, canning, fertilizing, pest control, diseases, and abnormal growth and planting medium and use. The use of the common tools and equipment.

**AG 48 (3)**  
**TREES, SHRUBS AND VINES**  
**3 Hrs. Lec.**

Selection, planting, propagation and cultural practices and vines in California and grapes.

**AG 49 (3)**  
**WEEDS AND WEED CONTROL**  
**3 Hrs. Lec.**

Common and noxious weeds, their identification and control. Chemicals and cultural practices for weed control on lawns, irrigation ditches, on wasteland. Poisonous weeds and their effects and prevention.

**AG 50 (3)**  
**SHOP MATHEMATICS**  
 3 Hrs. Lec.  
 (Same as Auto Tech 50, Math 50, P.L. 50, Weld 50)

**AG 51A (1)**  
**APPLIED CROP MANAGEMENT**  
 1 Hr. Lec.  
 The study and evaluation of cropping, and harvesting methods and management practices during fall months.

**AG 51B (1)**  
**APPLIED CROP MANAGEMENT**  
 1 Hr. Lec.  
 The study of field management practices during spring months.

**AG 51C (1)**  
**APPLIED CROP MANAGEMENT**  
 1 Hr. Lec.  
 The study and evaluation of cropping methods and crop rotation practices.

**AG 51D (1)**  
**APPLIED CROP MANAGEMENT**  
 1 Hr. Lec.  
 The study and evaluation of cropping methods for the Imperial Valley.

**AG 65 (3)**  
**CONTROL OF INSECTS AND OTHER PESTS**  
 3 Hrs. Lec.  
 Identification and methods of control of principle insect, rodent, disease, and other pests of crops. Use of pesticide application equipment. Health hazards in use of pesticides.

**AG 75 (3)**  
**INTRODUCTION TO INDUSTRIAL/ AUTOMOTIVE SKILLS**  
 1 Hr. Lec.  
 Same as Auto Tech 75, Weld 75)

**ALTERNATE ENERGY**

**E 10 (3)**  
**PRACTICAL METHODS IN SOLAR ENERGY**  
 3 Hrs. Lec.  
 This course explores active and passive solar design systems in housing construction, the low cost energy savers that renters can install and an evaluation and comparison of high technology and low technology solar designs.

**E 20 (3)**  
**ALCOHOL FUEL PRODUCTION**  
 3 Hrs. Lec.  
 Study of the procedures, processes and issues of entering into fermentation and alcohol production. Also included are instruction techniques applicable to an alcohol plant.

**ANATOMY**

**ANAT 6 (3)**  
**HUMAN ANATOMY & PHYSIOLOGY FOR THE LVN**  
 3 Hrs. Lec.  
 Introductory study of the structure and function of the human organism. Class is structured for the LVN student and is not open to students who have completed Anat 8 or Anat 10 with a grade of "C" or better.

**ANAT 8 (4)**  
**HUMAN ANATOMY**  
 2 Hrs. Lec. 6 Hrs. Lab.  
 Prerequisite: High school biology with a grade of C or better or Zool 1A or Bio 3. Systems of the human body and their interrelationships.

**ANAT 10 (5)**  
**HUMAN ANATOMY AND PHYSIOLOGY**  
 3 Hrs. Lec. 6 Hrs. Lab.  
 Prerequisites: One year of high school chemistry and biology or one semester each at the college level. A study of the structure and function of the human organism. Emphasis is on the circulatory, respiratory, excretory, nervous, reproductive, and digestive systems.

**ANTHROPOLOGY**

**ANTHRO 1 (3)**  
**PHYSICAL ANTHROPOLOGY**  
 3 Hrs. Lec.  
 The processes and course of human evolution; mankind's place in nature and the study of primates; the biological variability of living peoples and their genetic background.

**ANTHRO 2 (3)**  
**CULTURAL ANTHROPOLOGY**  
 3 Hrs. Lec.  
 Prerequisite: Eleventh grade reading level ability is recommended for success in this course. An introduction to the nature of culture, especially as seen in primitive society. Includes such topics as cultural history, the process of culture, technology, social organization, language, religion, and personality. May be taken before Anthro 1.

**ANTHRO 3A (3)**  
**INTRODUCTION TO ARCHAEOLOGICAL SITE SURVEYING**  
 2 Hrs. Lec. 5.33 Hrs. Lab.  
 Introduction to archaeological site surveying; historical development of archaeology; major contributors in 20th century; archaeological trends; methods of site surveying; types of sites; field reconnaissance; site reports and records; preparing field material for laboratory care and analysis; trails, artifacts, and features; equipment, use and care in the field.

**ANTHRO 3B (3)**  
**INTRODUCTION TO ARCHAEOLOGICAL EXCAVATIONS**  
 2 Hrs. Lec. 5.33 Hrs. Lab.  
 Introduction to archaeological excavations; mapping; laying out sites with transit, rod and alidade; archaeological excavation; selecting sites; testing and trenching; stratigraphy; keeping records; interpreting data; preparing laboratory materials; care of materials for carbon and amino acid dating; pollen and soil tests.

**ANTHRO 3C (3)**  
**ADVANCED ARCHAEOLOGICAL SURVEY**  
 2 Hrs. Lec. 5 Hrs. Lab.  
 Prerequisite: Anthro 3A and consent of the instructor. Students to conduct independent surveys, research records, devise tables and maps, lead small field crews on surveys and write technical but readable reports. Field surveys will be in various environmental areas in Imperial and San Diego counties. Students must plan for 1-3 additional hours by arrangement.

**ANTHRO 3D (3)**  
**ADVANCED ARCHAEOLOGICAL EXCAVATIONS**  
 2 Hrs. Lec. 5 Hrs. Lab.  
 Prerequisite: Anthro 3B and consent of the instructor. Students will design a field excavation project, organize a small field crew with which to carry it out, conduct record and literature searches, micro-map the area, process materials and data in the laboratory, and prepare a technical, but readable report on the findings. Laboratory studies will include curation, photography and C14 processing. Students must plan for 1-3 additional hours by arrangement.

**ANTHRO 4 (3)**  
**CALIFORNIA INDIANS**  
 3 Hrs. Lec.  
 A study of California Indians and the relationships of these tribal peoples to their environments; linguistic families; life styles of specific Indian tribal societies; Indian art, music, stories, religions, institutions, structures, artifacts, recent Indian history.

**ANTHRO 5 (3)**  
**ARCHAEOLOGY: THEORY,  
 PREHISTORY AND LABORATORY**  
 3 Hrs. Lec.

Prerequisites: Anthro 1, 2, 3A or 3B preferred. A course to introduce students interested in archaeology to the theory, development and application of this branch of science. This course will also cover, in outline form, the prehistory of the world as well as introduce the student to laboratory and recording work. Field work will not be required.

**ANTHRO 6 (3)**  
**INDIANS OF NORTH AMERICA**  
 3 Hrs. Lec.

Early migrations to the New World; demography and ecology of the Amerindian cultures in Alaska, Canada, United States, Mexico and Central America, in Pre-Columbian times. The modern Indian movement today.

**ANTHRO 7 (3)**  
**CLASSIC CIVILIZATIONS OF PRE-  
 HISTORIC MESO-AMERICA**  
 3 Hrs. Lec.

A study of the classic Aztecs, Mayas and Incas from their origins to their highly developed states and empires, and their eventual destruction. The controversial theories that Hyerdahl and von Daniken pose will be analyzed in factual light.

**ANTHRO 8 (3)**  
**INDIANS OF THE SOUTHWEST**  
 3 Hrs. Lec.

A study of the natural and human ecology of the Southwest as applied to aboriginal life; Early Man in the Southwest, especially the Cochise Culture; Meso-American influences; foundations and development of the Anasazi, Sinagua, Hohoka and Mogollon cultures. Intercultural relations, trade, ceramics, pueblo life, religion, art and agriculture. Cultural extensions into California. Rise of modern societies, as the Zuni, Hopi, Navajo and Apache. Contemporary life.

**ANTHRO 13 (1)**  
**INTRODUCTION TO LITHIC  
 TECHNOLOGY**  
 1 Hr. Lec. 2 Hrs. Lab.

Prerequisite: Anthro 3A. Aspects of prehistoric lithic technology are explored. Flint knapping techniques of direct percussion and pressure flaking are stressed. Emphasis is also placed upon detecting pre-historic use - wear on stone tools and the use of artifact typology on archaeological inference.

**ART**

**ART 3A (3)**  
**HISTORY AND APPRECIATION  
 OF ART**  
 3 Hrs. Lec.

A survey of the developments in art in painting, sculpture, architecture, and the minor arts from the birth of art to the Renaissance.

**ART 3B (3)**  
**HISTORY AND APPRECIATION  
 OF ART**  
 3 Hrs. Lec.

A continuation of Art 3A extending from the Renaissance to contemporary times. May be taken before or concurrently with Art 3A.

**ART 4 (3)**  
**HISTORY AND APPRECIATION OF  
 MODERN ART**  
 3 Hrs. Lec.

Art 4 is a broad analytical survey of painting, sculpture and architecture from 1900 up to the present. Emphasis is placed upon the development of styles of painting and their relationship to each other.

**ART 18A (3)**  
**WATERCOLOR PAINTING**  
 2 Hrs. Lec. 4 Hrs. Lab.

Prerequisite: Art 20A. The study of watercolor painting with emphasis upon color, composition and pictorial expression. Exploration of various techniques employing the medium of watercolor.

**ART 18B (3)**  
**WATERCOLOR PAINTING**  
 2 Hrs. Lec. 4 Hrs. Lab.

Prerequisite: Art 18A. Continuation of watercolor painting. Stress is on achieving confidence and fluency in the medium. Students are encouraged to expand the range of the experience acquired to include other water-based media.

**ART 20A (3)**  
**DRAWING**  
 2 Hrs. Lec. 4 Hrs. Lab.

A basic course in drawing involving analysis of line, form, tone, texture and color as essential media of expression.

**ART 20B (3)**  
**DRAWING**  
 2 Hrs. Lec. 4 Hrs. Lab.

Prerequisite: Art 20A. A continuation of 20A.

**ART 21A (3)**  
**PAINTING**  
 2 Hrs. Lec. 4 Hrs. Lab.

Prerequisites: Art 20A and 20B. A continuation of the development of composition and the various techniques employed in drawing and painting. Includes figure drawing, landscape, and still-life. Painting covers styles of painting from the Neo-classic to the present day.

**ART 21B (3)**  
**PAINTING**  
 2 Hrs. Lec. 4 Hrs. Lab.  
 Prerequisite: Art 21A. A 21A.

**ART 22A (3)**  
**DESIGN**  
 2 Hrs. Lec. 3 Hrs. Lab.  
 Fundamentals of design; theory of color. Inclusion and utilization of design through design problems.

**ART 22B (3)**  
**DESIGN**  
 2 Hrs. Lec. 3 Hrs. Lab.  
 Intermediate studies of principles of art with emphasis on dimensional design theory.

**ART 23A (3)**  
**CERAMICS**  
 1 Hr. Lec. 5 Hrs. Lab.  
 An introduction to ceramic methods of forming, decorating and firing.

**ART 23B (3)**  
**CERAMICS**  
 1 Hr. Lec. 5 Hrs. Lab.  
 Prerequisite: Art 23A. A continuation of Art 23A with emphasis on wheel.

**ART 23C (3)**  
**CERAMICS**  
 1 Hr. Lec. 5 Hrs. Lab.  
 Prerequisite: Art 23B with better. A continuation of Art 23B with special emphasis on glazing and decorating techniques.

**ART 24AB (3-3)**  
**CERAMIC SCULPTURE**  
 6 Hrs. Lab.  
 A course in basic ceramic techniques with emphasis on form.

**ART 25A (3)**  
**LIFE DRAWING**  
 6 Hrs. Lab.  
 Prerequisites: Art 20A grade of C or better. drawing and painting used to further the student development of visualization from the human figure.

**ART 25B (3)**  
**LIFE DRAWING**  
 6 Hrs. Lab.  
 Prerequisite: Art 25A. Art 25A. Art 25B includes painting techniques used.

**ART 28 (3)**  
**TECHNICAL CERAMICS**  
 2 Hrs. Lec. 3 Hrs. Lab.  
 Prerequisites: Art 23C instructor. A study of

used in compounding clay bodies and glazes. Specific problems of glaze calculations and techniques of glaze application.

**ART 30A (2)  
INTRODUCTION TO ART**  
1½ Hrs. Lec. 1½ Hrs. Lab.

An exploratory course intended for non-art majors; provides a basis for an understanding of the fundamental art principles. Offers experience in creative expression.

**ART 30B (2)  
INTRODUCTION TO ART**  
1½ Hrs. Lec. 1½ Hrs. Lab.

Prerequisite: Art 30A. A continuation of Art 30A which is an exploratory course intended for non-art majors; provides a basis for an understanding of the fundamental art principles. Offers experience in creative expression.

**ART 33 (1)  
GALLERY DISPLAY**  
2 Hrs. Lab.

Theories, techniques and practices of art gallery exhibition.

**ART 40 (2)  
EXPLORATION OF ACRYLIC  
PAINTING TECHNIQUES**  
1 Hr. Lec. 2 Hrs. Lab.

An exploratory course which provides opportunities to work with the various polymer emulsion paints. Basic painting assignments to develop individual application of techniques. Initial exercises in color usage and structure of the painting. Suggestions and evaluation of student work will take place on an individual basis.

**ASTRONOMY**

**ASTRON 21 (3)  
ELEMENTARY ASTRONOMY**  
3 Hrs. Lec.

Prerequisite: Completion of the Mathematics 51 requirement. The course covers the solar system, the stars, Milky Way galaxy, cosmology, and the identification of stars and constellations the planetarium.

**AUTOMOTIVE BODY AND PAINT**

**AUTO BODY 70 (5)  
AUTO BODY REPAIRING AND  
PAINTING**  
3 Hrs. Lec. 6 Hrs. Lab.

Prerequisites: Weld 30 and Weld 32, or permission of the instructor. The study covers all phases of body repair and painting. Covers the use of modern tools and equipment and procedures for handling typical body-paint jobs. A materials fee will be charged.

**AUTO BODY 71 (5)  
ADVANCED AUTO BODY  
REPAIRING AND PAINTING**  
3 Hrs. Lec. 6 Hrs. Lab.

Prerequisites: Auto Body 70 or permission of instructor. Covers all phases of body repairing and repainting. Use of modern tools and equipment, step-by-step procedures for handling typical jobs. A materials fee will be charged.

**AUTO BODY 72 (5)  
AUTO AND LIGHT TRUCK MAJOR  
COLLISION REPAIRING**  
3 Hrs. Lec. 6 Hrs. Lab.

Prerequisites: Auto Body 71 and/or concurrently Weld 30, Weld 32 or permission of the instructor. Covers all phases of heavy collision repair including extensive frame and undercarriage damage, using modern equipment with step-by-step procedures. A materials fee will be charged.

**AUTOMOTIVE TECHNOLOGY**

Some courses in the field of Automotive Technology are offered on alternate years only. Students should keep this in mind as they plan their long-range programs of study with the assistance of their counselors.

**AUTO TECH 50 (3)  
SHOP MATHEMATICS**  
3 Hrs. Lec.

(Same as Ag 50, Math 50, P.L. 50 and Weld 50)

**AUTO TECH 51 (5)  
ENGINE TECHNOLOGY**  
3 Hrs. Lec. 6 Hrs. Lab.

For the student with little or no internal combustion engine background. Design, construction and mechanical function of internal combustion engines including lubricating, cooling, fuel and electrical systems; and an understanding of the basic sciences relevant to such topics as internal combustion and energy conversion. A materials fee will be charged. (Same as Ag 33A)

**AUTO TECH 52 (3)  
MANUAL TRANSMISSIONS &  
POWER TRAINS**  
2 Hrs. Lec. 3 Hrs. Lab.

Design, construction and mechanical function of clutches, manual transmissions, overdrives and power transmitting mechanisms. A materials fee will be charged.

**AUTO TECH 53 (3)  
BRAKES AND SUSPENSION**  
2 Hrs. Lec. 3 Hrs. Lab.

Prerequisite: Auto Tech 51 or two years of high school auto mechanics. Study of manual and power braking systems, wheel alignment, spring suspension,

tires, tire trueing, wheel balancing, and wheel bearings. Diagnosis and services procedures on repair jobs. A materials fee will be charged.

**AUTO TECH 54 (3)  
CARBURETORS, FUEL AND  
EXHAUST SYSTEMS**  
2 Hrs. Lec. 3 Hrs. Lab.

Advanced study of automotive fuel systems (carburetors, fuel pumps, intake manifolds, exhaust system and emission controls). Basic diagnosis and service procedures on systems. A materials fee will be charged.

**AUTO TECH 55 (5)  
ADVANCED GASOLINE ENGINES**  
3 Hrs. Lec. 6 Hrs. Lab.

Prerequisite: Auto Tech 51 or two years of high school auto mechanics. Review and advanced study of the internal combustion engine and service procedures in the use of automotive machine shop tools and machines for rebuilding the engine. A materials fee will be charged. (Same as Ag 33B)

**AUTO TECH 56 (3)  
DIAGNOSTICS**  
2 Hrs. Lec. 3 Hrs. Lab.

Prerequisite: Auto Tech 54 and Auto Tech 60. Trouble shooting the various components of the automobile using the oscilloscope and dynamometer and other precision instruments. To include the study and servicing of various automotive smog devices. A materials fee will be charged.

**AUTO TECH 57 (4)  
FLUID POWER**  
3 Hrs. Lec. 3 Hrs. Lab.

A study of the principles and laws governing fluids. The design and function of hydraulic and pneumatic components, seals, fluid types, circuits and symbols. Latest developments in the control and transfer of energy and its relationship to automotive technology. A materials fee will be charged. (Same as Ag 35)

**AUTO TECH 58 (3)  
AUTOMOTIVE AIR-CONDITIONING**  
2 Hrs. Lec. 3 Hrs. Lab.

Prerequisites: Auto Tech 54 or two years high school auto mechanics. The course is designed to impart knowledge and information needed by the student to enter and make progress in employment on a productive basis in the automotive air-conditioning service industry. A materials fee will be charged.

**AUTO TECH 59 (3)  
SMALL GASOLINE ENGINES**  
2 Hrs. Lec. 2 Hrs. Lab.

The history, design, construction and mechanical function of the small gaso-

line engine, including tune-up and major repair of the electrical and mechanical systems. A materials fee will be charged. (Same as Ag 37)

**AUTO TECH 60 (3)  
ELECTRICAL, STARTING,  
CHARGING, IGNITION AND  
RELATED ELECTRICAL SYSTEMS**  
2 Hrs. Lec. 3 Hrs. Lab.

Advanced study of automotive electrical systems. Basic diagnosis and service procedures on the various systems. A materials fee will be charged.

**AUTO TECH 61 (5)  
AUTOMATIC TRANSMISSIONS**  
3 Hrs. Lec. 6 Hrs. Lab.

Design, construction, mechanical and hydraulic function and repairs of the automatic transmission. A materials fee will be charged.

**AUTO TECH 63 (5)  
DIESEL ENGINE FUNDAMENTALS**  
3 Hrs. Lec. 6 Hrs. Lab.

Prerequisite: Auto Tech 51/Ag 33A or permission of the instructor. Design, construction and mechanical function of the diesel engine, including lubrication, cooling, fuels, fuel injectors, governors and safety. A materials fee will be charged. (Same as Ag 33C)

**AUTO TECH 65 (3)  
BASIC MACHINE SHOP  
TECHNOLOGY**  
2 Hrs. Lec. 3 Hrs. Lab.

A general course designed for students desiring to work in the various areas of automotive technology involving machine shop operations. Skill is developed in the operation of lathes, milling machines, drill presses, grinders, shapers, hand and bench tools, and heat treating. The proper use of materials, safety and care of equipment is emphasized. A materials fee will be charged.

**AUTO TECH 75 (3)  
INTRODUCTION TO INDUSTRIAL/  
AUTOMOTIVE SKILLS**  
3 Hrs. Lec.

This is a comprehensive course in tool usage, nomenclature and terminology of tools and equipment for the beginning student in the technologies. The course is for the student who has not developed a background in industrial technology, as well as for the bilingual student who wants to improve his/her technical vocabulary. (Same as Ag 75, Weld 75)

**AUTO TECH 80 (2)  
EMISSION CONTROLS AND  
HEADLIGHT DIAGNOSIS AND  
ADJUSTMENTS**  
1½ Hrs. Lec. 1½ Hrs. Lab.

Prerequisites: Auto Tech 51, Auto Tech 54, Auto Tech 56 or experience as a

mechanic in the automotive field. Review and advance study of tune-up, emission controls and headlight problems using correct procedures as set forth by the State of California. This course will also be using required specifications and equipment.

**AUTO TECH 81 (2)  
BRAKE LICENSING AND  
AIR-CONDITIONING**  
1½ Hrs. Lec. 1½ Hrs. Lab.

Prerequisites: Auto Tech 53 or permission of the instructor. This course is designed for those students who wish to pass the brake licensing state test by learning state laws, brake adjusting and repair procedures and trade servicing of automotive air-conditioning.

**AUTO TECH 90ABC (3-3-3)  
ADVANCED AUTO TECH SHOP  
PRACTICE**  
1 Hr. Lec. 4 Hrs. Lab.

Prerequisite: Successful completion of at least 14 units in automotive technology or permission of the instructor. Auto Tech applied shop practices is for advanced students who wish to refine technical skills prior to obtaining employment in the industry.

**BIOLOGY**

**BIO 3 (4)  
PRINCIPLES OF BIOLOGICAL  
SCIENCE**  
3 Hrs. Lec. 3 Hrs. Lab.

Not open to students with credit in Zoology or Botany. A consideration of basic biological phenomena. Designed for those students who intend to take only one semester of general biological science. May be combined with Physical Science 25 for a year course in the basic principles of natural science.

**BIO 21 (4)  
GENERAL MICROBIOLOGY**  
2 Hrs. Lec. 6 Hrs. Lab.

Prerequisite: One year each of high school chemistry and biology or one semester each at college level. Provides students with fundamental concepts of the structure and physiology of non-disease and disease producing microorganisms with particular attention to bacteria. Basic techniques for culturing, staining, counting and identifying microorganisms. Designed to meet the requirement to enter one of the medical fields as well as general education.

**BOTANY**

**BOT 1A (4)  
GENERAL BOTANY**  
2 Hrs. Lec. 6 Hrs. Lab.

Prerequisite: Any year course in a high school laboratory science. Designed to present a comprehensive view of the

structure and function of leaves, flowers, and seedling plants.

**BOT 1B (4)  
GENERAL BOTANY**  
2 Hrs. Lec. 6 Hrs. Lab.  
Prerequisite: Bot 1A.  
present a comprehensive structure and function of forms; typical representative fungi, mosses, ferns, plants in proper relation

**BUSINESS**

**BUS 1A (4)  
PRINCIPLES OF ACCOUNTING**  
4 Hrs. Lec. 1 Hr. Lab.  
Prerequisite: Satisfactory mathematics placement completion of Math 51 w grade. Introduction to the practice, and principles of they relate to service and mercantile enterprises. completion of the accounting sales, purchases, summing, receivables, inventories, deferrals depreciation, systems and payroll systems.

**BUS 1B (4)  
PRINCIPLES OF ACCOUNTING**  
4 Hrs. Lec. 1 Hr. Lab.  
Prerequisite: Satisfactory Bus 1A. Principles involving corporations, double counting, process costing, order costs, budgetary taxes, cash flow, and financial analysis.

**BUS 2 (3)  
INTRODUCTION TO BUSINESS**  
3 Hrs. Lec.  
A basic beginning course introduces U.S. business. Includes the nature and business, business formation, management, financial government and legal and taxes.

**BUS 3 (3)  
BUSINESS MANAGEMENT**  
3 Hrs. Lec.  
A study of the organizing problems of a business; business m

**BUS 4 (3)  
PRINCIPLES OF MANAGEMENT**  
3 Hrs. Lec.

The organization and terms for the distribution services; includes a wholesale distribution

consumer buying characteristics, marketing of industrial goods, cooperative marketing of agricultural products, pricing policies and governmental regulations.

**BUS 5A (3)  
BUSINESS LAW  
3 Hrs. Lec.**

Principles of business law and their application to actual cases involving business transactions, law and the resolution of disputes, social forces and legal rights, contracts, agency and employment, and commercial paper.

**BUS 5B (3)  
BUSINESS LAW  
3 Hrs. Lec.**

Principles of business law and their application to actual cases involving business transactions, personal property and bailments, sales, security devices and insurance, partnerships, corporations, real property, estates and bankruptcy, and government and business. Bus 5B may be taken before Bus 5A.

**BUS 6 (3)  
MANAGEMENT CONCEPTS OF SUPERVISION  
3 Hrs. Lec.**

The role of the supervisor in industry and business; the development of techniques in meeting administrative, organizational, labor and human relations problems; the utilization of men, machines and materials, and case studies in supervisory problems.

**BUS 7 (3)  
HUMAN RELATIONS IN MANAGEMENT  
3 Hrs. Lec.**

Improving supervision by the use of basic psychology in building better employer-employee relationships through human relations techniques; development of leadership qualities; main human relations problems and their causes and solutions.

**BUS 8 (3)  
PERSONNEL MANAGEMENT  
3 Hrs. Lec.**

A course that introduces personnel management in the light of current theories and practices based upon research and company experience. Includes the personnel management system, staffing, employee and management development, group behavior, management-union relations, compensation, security and a look into the future.

**BUS 9 (3)  
MATHEMATICS FOR BUSINESS ANALYSIS  
3 Hrs. Lec.**

(Same as Math 17)

**BUS 10A (3)  
PRACTICAL BOOKKEEPING  
3 Hrs. Lec.**

A basic course in elementary basic accounting principles that uses the "practice set approach" to learn how to journalize and post transactions for service-type businesses that keep their books on the cash basis.

**BUS 10B (3)  
PRACTICAL BOOKKEEPING  
3 Hrs. Lec.**

Prerequisite: Bus 10A or permission of instructor. A course that uses the "practice set approach" in learning how to journalize and post transactions for merchandising businesses that keep their books on the accrual basis.

**BUS 13 (3)  
APPLIED BUSINESS LAW  
3 Hrs. Lec.**

A one-semester course covering courts and court procedures, contracts, sales, bailments, negotiable instruments, agency and employment, partnerships, corporations, insurance, and property. Not open to students who have completed Bus 5 or the equivalent.

**BUS 14 (3)  
PRACTICAL SALESMANSHIP  
3 Hrs. Lec.**

The practical background of salesmanship; the duties and functions of a salesperson in the selling of ideas, services, and products. Includes the place and importance of salespeople in the marketing structure of the U.S. economy.

**BUS 19 (3)  
PERSONAL DEVELOPMENT FOR EMPLOYMENT  
3 Hrs. Lec.**

A thorough study of the process and practice of obtaining employment in the business world. Designed to meet the special needs of students in the fields such as: Marketing-Distribution; Business Supervision; Secretarial-Clerical; Accounting-Bookkeeping; and Data Processing, etc. Skills development in the areas of job search, employer contact, resume writing, interviewing techniques, interview follow-up, proper dress, and job-holding practices.

**BUS 20 (2)  
ELEMENTARY TYPEWRITING  
2 Hrs. Lec. 3 Hrs. Lab.**

Designed to impart the fundamental skills and knowledge of typing. The student is introduced to the basic concepts of typewriting production. Not open to students who have had previous instruction in typewriting.

**BUS 21AB (2-2)  
PROFICIENCY—EXIT TYPEWRITING  
1 Hr. Lec. 4 Hrs. Lab.**

Prerequisite: Bus 20 or the ability to type 20 wpm. Designed to bring students to an office-level skill. Emphasis is placed on business letters, manuscripts, tabulation and statistical work. Bus 21B may be taken by those students who do not attain office-level proficiency in Bus 21A.

**BUS 22 (3)  
WORD PROCESSING  
2 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: Ability to type 40 wpm, Bus 40, or permission of instructor. Designed to teach students to use various word-processing equipment including the mini-computer, micro-computer, electronic typewriter and machine transcription equipment.

**BUS 23 (3)  
OFFICE MACHINES  
2 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: Satisfactory score on mathematics placement test or completion of Math 51 with a C or better grade. Develops skills required for rapid and accurate operation of calculating machines.

**BUS 24 (3)  
RECORDS MANAGEMENT  
3 Hrs. Lec.**

Lecture and supervised individual and group procedural activity designed to acquaint students with progressive filing and records management rules, procedures and techniques. Alphabetic, numeric, geographic and subject filing are studied.

**BUS 26 (3)  
ELEMENTARY STATISTICS  
3 Hrs. Lec.**

(Same as Math 12/Psych 12)

**BUS 31 (3)  
ELEMENTARY SHORTHAND  
2 Hrs. Lec. 3 Hrs. Lab.**

A beginning course in Gregg Shorthand. Theory and dictation practice. Designed for the needs of professional secretaries.

**BUS 32AB (3-3)  
DICTATION AND TRANSCRIPTION LAB  
1 Hr. Lec. 4 Hrs. Lab.**

Prerequisite: Bus 31 or Bus 33 or one year of high school shorthand. Minimum dictation rate of 60 wpm. Review of theory with increasing emphasis on dictation and transcription speed building to produce mailable copy of business dictation.

**BUS 39 (3)  
OFFICE PROCEDURES****2 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: Bus 21AB or the ability to type 50 wpm. An integrated course oriented toward production techniques that meet the standards of the business community. Covers the full range of office duties stressing those competencies required of the general office worker.

**BUS 40 (3)  
GRAMMAR AND USAGE****3 Hrs. Lec.**

Prerequisite: Assignment by placement test. A review of the parts of speech, the structure of the sentence, and punctuation. Exercises to improve English usage will begin with the writing of various sentence types and progress to the writing of single descriptive and expository paragraphs. Designed for the student who needs to review and practice basic skills before taking Eng 51 or Eng AB. Concurrent enrollment in Eng 50AB is strongly recommended. Satisfies part of the graduation requirement in communications.

**BUS 41 (2)  
ESSENTIALS OF BUSINESS  
CORRESPONDENCE****2 Hrs. Lec.**

Prerequisite: Ability to type. Bus 40 recommended. Emphasizes the basic elements and skills necessary for effective business communications. The business vocabulary — pronunciation, spelling, meaning, and punctuation — together with standard letter-writing styles will be stressed. Not open to students who have completed Bus 42.

**BUS 42 (3)  
BUSINESS CORRESPONDENCE****3 Hrs. Lec.**

Prerequisite: Typing skill. Major emphasis will be given to letter form and style, the psychology of the sales letter, letters of complaint and adjustment, credit and collection, job application and the business report.

**BUS 43 (3)  
BUSINESS CORRESPONDENCE IN  
SPANISH****3 Hrs. Lec.**

(Same as Span 19)

**BUS 48 (2)  
MEDICAL INSURANCE****2 Hrs. Lec.**

Prerequisite: Bus 21AB. A course for persons intending to work in a physician's office, hospital or clinic business office. Topics include Medi-Cal, Medicare, Workmen's Compensation,

group and individual health insurance policies, professional liability, instruction in reading and interpreting policies, completion of forms from medical records.

**BUS 49A (3)  
MEDICAL TERMINOLOGY FOR  
SECRETARIES****3 Hrs. Lec.**

Provides training in the proper usage, meaning and origin of terms and names used in the medical sciences. Emphasizes terms utilized in the state of health, symptoms, diagnostic tools and diagnoses. The course is designed for medical secretarial students.

**BUS 49B (3)  
MEDICAL TERMINOLOGY FOR  
SECRETARIES****3 Hrs. Lec.**

Prerequisite: Bus 49A. Provides training in the proper usage, meaning and origin of terms and names used in the medical sciences. Emphasis is on diagnosis and treatment of disease states. The course is designed for medical secretarial students.

**BUS 50 (3)  
INTRODUCTION TO DATA  
PROCESSING****3 Hrs. Lec.**

An introductory course designed to teach the basic understanding of data processing systems, to survey unit-record machines, to familiarize the student with the electronic computer as the basis for data processing systems and to teach basic Fortran IV.

**BUS 51 (3)  
DATA PROCESSING OPERATIONS****3 Hrs. Lec. 1 Hr. Lab.**

An introduction to computer hardware and its operation. Students will experience actual hands-on operation with key punches, sorters, key-to-tape devices, and digital computers.

**BUS 52 (3)  
COMPUTER PROGRAMMING I****3 Hrs. Lec.**

Prerequisite: Bus 50. A basic course in the programming of electronic digital computers to prepare programmers and students of closely related occupations for employment in business and industry. Course covers problems of data processing, characteristics of computers and computer programming.

**BUS 53 (3)  
COMPUTER PROGRAMMING II****3 Hrs. Lec.**

Prerequisite: Bus 52. A second semester course in electronic digital computer programming designed for student achievement of technological proficiency in programming input and

output devices, machine-program optimizing, basic finance, computer problem report writing.

**BUS 54 (3)  
DATA PROCESSING SYSTEMS****3 Hrs. Lec.**

Prerequisite: Bus 53. A course in data processing systems and including analysis of various business data processing integrated processing program management information systems concepts. Case studies developing detailed data processing procedures are stressed.

**BUS 55 (3)  
PROGRAMMING IN FORTRAN****3 Hrs. Lec.**

A practical course covering fundamentals of Fortran Programming language as adapted to a variety of applications. (Same as M

**BUS 56AB (1-1)  
COMPUTER OPERATION****2 Hrs. Lab.**

Prerequisite: Concurrent Bus 52, Bus 53 and/or Bus 54. Designed to provide an opportunity for additional experiences with software and hardware related to the operation of computers. (Same as M

**BUS 57 (3)  
PROGRAMMING IN BASIC****3 Hrs. Lec.**

Prerequisite: Bus 50 is recommended. A practical course covering fundamentals of BASIC Programming language as adapted to a variety of applications. (Same as M

**BUS 60 (3)  
PRINCIPLES OF BANKING****3 Hrs. Lec.**

Fundamentals of banking presented in a descriptive fashion so that the student may seek a broad perspective in banking.

**BUS 61 (3)  
ANALYSIS OF FINANCIAL  
STATEMENTS****3 Hrs. Lec.**

Prerequisites: Bus 1A and Bus 50. This course focuses upon analysis of credit to appraise and nature of risk involved in determining the willingness of a prospective debtor to repay a loan in accordance with the terms of the loan. Topic includes profit and loss statements, Analyzing of inventory and ratio analysis.



**BUS 62 (3)  
INSTALLMENT CREDIT**

**3 Hrs. Lec.**  
In this class, emphasis is placed on establishing the credit obtained in checking information; servicing the loan and calculating the amount due. Other topics discussed are inventory financing and special loan programs. Business development advertising in the relations aspect of installment lending.

**BUS 63 (3)  
FINANCING BUSINESS ENTERPRISES**

**3 Hrs. Lec.**  
Stress is placed on the difference between lending and investing. Investing in a corporation and financing a corporation or the different aspects of the same subject. In this course, the material is presented from a viewpoint of a corporate treasurer who must safeguard the financial future of his corporation.

**BUS 64 (3)  
AGRICULTURAL FINANCE**

**3 Hrs. Lec.**  
This course emphasizes general principal associations with evaluation of management and the use of capital rather than stressing the examination of land and labor resources which are more closely aligned with agricultural production. An understanding of agricultural financing should help the banker in satisfying the credit needs of modern agriculture.

**BUS 65 (2)  
RETAIL SALES CHECKING**

**2 Hrs. Lec. 1 Hr. Lab.**  
A practical skills course of instruction designed to prepare a person to become an efficient retail sales checker.

**BUS 70 (3)  
FUNDAMENTALS OF GOVERNMENTAL MANAGEMENT**

**3 Hrs. Lec.**  
Explores theory and practice of complex organizations with emphasis on administrative structure and functions, the role of bureaucracy; and the conditioning of administration by its environment. Techniques and practices are suggested which will help carry out duties effectively. Deals with management analysis techniques; systems analysis and systems implementation; organization audits appraisal and management by objectives; work and time measurement techniques; the organization (chart), its structure and communications system; forms and records management; manuals and other administrative directives; work simplification techniques of work-flow and process charting; reports control.

**BUS 71 (3)  
STATE AND LOCAL GOVERNMENT MANAGEMENT**

**3 Hrs. Lec.**  
State, county, city and special district governments explored in terms of urban and metropolitan challenges confronting political units in California and the local vicinity, with emphasis on racial and ethnic relations, problems in provision of public services, crime and justice, planning and renewal, intergovernmental conflict and relations; including a description of administration, identification of sources of fiscal support, inventory of services, and procedures for regulation and modification.

**BUS 72 (3)  
FINANCE MANAGEMENT**

**3 Hrs. Lec.**  
Appraises the usefulness of fiscal mechanism, outlines the generally accepted principles of organization and procedure, the relationships of the several fiscal functions to each other. Surveys fiscal policies; the appropriation process; accounting, tax, revenue, financial controls, reporting, and analysis; budget preparation, authorization, and execution; planning budgeting system; fiscal relationships; cost analysis; and audits.

**BUS 79 (3)  
PUBLIC RELATIONS TECHNIQUES**

**3 Hrs. Lec.**  
(Same as Jrn 8)

**BUS 89 (3)  
LAW OFFICE PROCEDURES AND PRACTICES FOR SECRETARIES**

**3 Hrs. Lec.**  
Practical instruction and exercises for secretaries. Emphasis on forms of pleadings; procedures for various actions (civil procedure, real estate, probate and conservatorships, family law); the law library and legal research; dictation of legal documents.

**BUS 90 (3)  
REAL ESTATE PRINCIPLES**

**3 Hrs. Lec.**  
An analysis of the principles of real estate in California; history of California real estate, property, contractors, agency, listings, real estate financing, deeds, liens and encumbrances, escrows and title insurance, land descriptions, real estate mathematics, and real estate licensing and state regulations.

**CARPENTRY**

**CARP 1 (3)  
APPRENTICESHIP AND MATHEMATICS**

**2 Hrs. Lec. 2 Hrs. Lab.**  
Prerequisite: Permission of the instructor. This course is designed so that the

apprentice will know what part to take in the construction industry. It will introduce the following subjects: the construction industry, collective bargaining, the role of government, wages and benefits, the purpose of the joint apprenticeship committee, and the development of carpentry mathematics skills which are necessary.

**CARP 2 (3)  
PRE-JOB AND PLOT PLANNING**

**2 Hrs. Lec. 2 Hrs. Lab.**  
Prerequisite: Successful completion of Carp 1 or permission of the instructor. This course is designed to introduce the apprentice to interpret and apply the building codes, the types and purposes of pre-job planning, who is responsible for it, why it is important and where it begins. The student will also learn to read blueprints and specifications, understand surveys, property and building lines, and setbacks. Excavating and trenching, foundations, walls and retaining wall forms will also be covered.

**CARP 3 (3)  
ROUGH FRAMING**

**2 Hrs. Lec. 2 Hrs. Lab.**  
Prerequisite: Satisfactory completion of Carp 2 or permission of the instructor. This course is designed to teach the student various methods of framing, such as plot form or Western versus Ballon Framing, materials used, limitations in building, fire preventions, layout procedures and how to calculate for rough openings and a study of the building codes.

**CARP 4 (3)  
ROOF FRAMING**

**2 Hrs. Lec. 2 Hrs. Lab.**  
Prerequisite: Satisfactory completion of Carp 3 or permission of instructor. A course designed to cover the types and styles of roofs, roof framing tools, roof design, layout of common and shed roof rafters, layout of hip, volley and jack rafters, materials, and erecting roofs.

**CARP 5 (3)  
INTERIOR AND EXTERIOR FINISH**

**2 Hrs. Lec. 2 Hrs. Lab.**  
Prerequisite: Completion of Carp 4 or permission of the instructor. A complete study of modern home exteriors and interiors; finishes and design will be covered. Emphasis will be on why certain types of materials are used. Nomenclature and the methods of cutting and installing finishes will be studied.

**CARP 6 (3)  
STAIR BUILDING**

**2 Hrs. Lec. 2 Hrs. Lab.**  
Prerequisite: Satisfactory completion of Carp 5. The student will study the many

types of stairs and stair design. The code requirements for stairway construction will be covered.

**CARP 7 (3)  
CONCRETE AND FORMS  
2 Hrs. Lec. 2 Hrs. Lab.**

Prerequisite: Completion of Carp 6 or permission of the instructor. The student will learn how to erect concrete forms and identify the materials to be used, which is a very important area of study. Estimating the amount of concrete needed and how to place it will also be learned.

**CARP 8 (3)  
HEAVY TIMBER CONSTRUCTION  
AND WELDING  
2 Hrs. Lec. 2 Hrs. Lab.**

Prerequisite: Completion of Carp 7 or permission of the instructor. This course is designed to teach the student how to place timbers and secure them, usually in dams and bridges. Welding in the areas important for the journeyman will be taught. Nomenclature of heavy timber construction will be covered.

**CHEMISTRY**

**CHEM 1A (5)  
GENERAL INORGANIC CHEMISTRY  
3 Hrs. Lec. 6 Hrs. Lab.**

Prerequisites: High school algebra and plane geometry or satisfactory score on mathematics placement exam, high school chemistry or Chem 2A. Fundamental principles and theory of atomic and molecular structure related to bonding and geometry. Study of kinetic molecular theory and the first law of thermodynamics. Periodic relationships of the elements, physical states of matter, solutions, oxidation-reduction, electrolysis and equilibrium. Laboratory exercises to strengthen and illustrate concepts from lectures.

**CHEM 1B (5)  
GENERAL INORGANIC CHEMISTRY  
3 Hrs. Lec. 6 Hrs. Lab.**

Prerequisite: Chem 1A with a minimum grade of C. Detailed study of three laws of thermodynamics and their relation to chemical reactions, rates of reactions and equilibrium. Survey of selected groups from the periodic table, oxidation-reduction with respect to concentration, nuclear processes and introductory organic reactions. Laboratory exercises related to electrochemical studies and qualitative analysis.

**CHEM 2A (4)  
INTRODUCTION TO CHEMISTRY  
3 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: One year of high school algebra or its equivalent. Intended for students who have not had high school chemistry or who need further prepara-

tion for Chem 1A. The course is recommended for those who desire a basic understanding of the elementary principles of chemistry. Not open to students who have completed Chem 1A or the equivalent. Course may be offered as a Credit class.

**CHEM 5 (4)  
QUANTITATIVE ANALYSIS  
2 Hrs. Lec. 6 Hrs. Lab.**

Prerequisite: Chem 1B. Theory and practice of volumetric and electrochemical methods of analysis. (Usually offered during Summer Session)

**CHEM 12 (5)  
ORGANIC CHEMISTRY  
3 Hrs. Lec. 6 Hrs. Lab.**

Prerequisite: Chem 1B. A study of the compounds of carbon with special emphasis on the aliphatic compounds; includes an introduction to the aromatic compounds. Emphasis is given to the molecular orbital concept throughout the course.

**CONSTRUCTION INSPECTION**

**CI 6A (3)  
CONSTRUCTION INSPECTION FOR  
FIRE PREVENTION  
3 Hrs. Lec.**

A basic course designed to give the student a fundamental understanding of the elements and concepts involved in the fire and life safety provisions of the Uniform Building Code.

**CI 6B (3)  
INSPECTION FOR FIRE PREVENTION  
3 Hrs. Lec.**

A basic course designed to give the student a fundamental understanding of the elements and concepts involved in the construction and inspecting provisions of the Uniform Building Code. A continuation of CI 6A.

**COSMETOLOGY**

The A.S. Degree will be awarded to graduates of cosmetology schools who meet the following criteria and complete the following program:

1. Graduate of a school of cosmetology that prepared students for a State Board of Cosmetology Examination.
2. Present California Cosmetologist License.
3. Present enrollment at Imperial Valley College.

Blanket credit for cosmetology courses completed ..... 45 units  
(Corresponds to number of Cosmetology course units in IVC Cosmetology Major.)

Subject Area and General courses to meet requirements for graduation .....

Physical Education and Military Training required

Application for this degree requires completion of items 1 and 2 of the criteria. Check with the instructor of Cosmetology of Vocational-Technical Institute. Check with Counseling Office for procedure to follow.

**COS 50A (10)  
INTRODUCTION TO COSMETOLOGY  
360 Classroom Hrs.**

Prerequisite: At least a high school education or the equivalent. State regulations set forth by the State Board of Cosmetology. Introduction to sterilization for patron protection. development as a cosmetologist. Introduction to all phases of cosmetology including theory and practice. Introduction to the Anatomy and Physiology of the Skin. Culture. Instruction in proper care of all equipment used in cosmetology.

**COS 50B (10)  
INTRODUCTION TO COSMETOLOGY  
360 Classroom Hrs.**

Prerequisite: At least a high school education or the equivalent. Application to cosmetic chemistry: application to shampoo, hair coloring, manicuring, styling, curl construction, placement. Theory of dermatology. Diseases pertaining to cosmetology: make-up, basic hair cut treatments.

**COS 52A (10)  
INTERMEDIATE COSMETOLOGY  
360 Classroom Hrs.**

Prerequisite: At least a high school education or the equivalent. Board of Cosmetology Act and rules set for anatomy and bacteriology in cosmetology. Theory training in chemical hair pressing. Use of equipment in all phases of cosmetology.

**COS 52B (10)  
INTERMEDIATE COSMETOLOGY  
360 Classroom Hrs.**

Prerequisite: At least a high school education or the equivalent. Theoretical and practical training in all phases of cosmetology. Laboratory experience. Techniques, methods of advancement and the construction, use of wigs. Laboratory safety use of chemicals.

**COS 54A (5)  
ADVANCED COSMETOLOGY  
160 Classroom Hrs.**

Prerequisite: At least a 10th grade education or the equivalent. Theory of salon management and employment practices. Study of electricity, use of the sonoscope, and training in use of slide and movie projectors. State Board preparation in all phases of cosmetology.

**DRAMATIC ART**

**DRM ART 5A (3)  
HISTORY OF WORLD DRAMA  
3 Hrs. Lec.**

The study of the history of drama and theatre development from primitive times to the present. Emphasis will be placed on the correlation between staging and acting techniques and dramatic literature. Drm Art 5A covers theatre development through Ibsen.

**DRM ART 5B (3)  
HISTORY OF WORLD DRAMA  
3 Hrs. Lec.**

Covers the period from Ibsen to the present. Drm Art 5B may be taken before Drm Art 5A.

**DRM ART 20AB (3-3)  
FUNDAMENTALS OF ACTING  
2 Hrs. Lec. 3 Hrs. Lab.**

An introduction to the interpretation of drama through the art of the actor. Development of individual insights, skills, and disciplines in the presentation of the dramatic material to an audience. Laboratory hours to be arranged.

**DRM ART 21 (3)  
INTERMEDIATE ACTING  
2 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: Drm Art 20AB. A continuation of Drm Art 20AB with further emphasis on fundamental acting skills, laboratory hours to be arranged.

**DRM ART 22ABCD (1-1-1-1)  
REHEARSAL AND PERFORMANCE  
1 Hrs. Lab.**

Prerequisite: Permission of the instructor. Enrollment contingent upon participation in campus major dramatic production. Maximum credit 1 unit per semester for four semesters. Hours to be arranged.

**EARLY CHILDHOOD EDUCATION**

**ECE 4 (3)  
LINGUAL-MULTICULTURAL  
CURRICULUM AND INSTRUCTION  
3 Hrs. Lec.**

Same as TA 4)

**ECE 6 (3)  
LANGUAGE DEVELOPMENT FOR  
YOUNG CHILDREN  
3 Hrs. Lec.**

(Same as TA 6)

**ECE 8 (3)  
MATHEMATICS FOR YOUNG  
CHILDREN  
3 Hrs. Lec.**

(Same as TA 8)

**ECE 20 (3)  
DEVELOPMENTAL PSYCHOLOGY  
OF CHILDREN  
3 Hrs. Lec.**

A study of the psychological development of children, aimed at immediate and practical application of child rearing theory and practice, designed for prospective parents, parents, and those working with children. The course will cover the research and theories on factors affecting or altering children's behavior, intelligence, learning, mental and physical well-being, and motivation. The factors covered would include heredity, environment, maturation, and prenatal, natal, and postnatal physiology. (Same as Psych 20)

**ECE 21 (3)  
EARLY CHILDHOOD SOCIALIZATION:  
CHILDREN, FAMILY AND  
COMMUNITY  
3 Hrs. Lec.**

This course includes the dynamics of the child-parent-teacher relationships; patterns of family living and influences on the child; home-nursery school communication and development of community resources. The effect of cultural differences will be covered. The course is designed to encourage and promote the child's self-development within the sociological environment. While this course lends itself to nursery school personnel, it can also be used by parents and prospective parents. (Same as Psych 21)

**ECE 22 (3)  
PRINCIPLES OF CHILD  
DEVELOPMENT AND OBSERVATION  
3 Hrs. Lec.**

Application of the principles of the physical, intellectual, emotional and social growth in early childhood education. Observations and visitations to various types of schools in the community will be required. (Same as Psych 22)

**ECE 23 (3)  
EARLY CHILDHOOD  
DEVELOPMENTAL CURRICULUM  
3 Hrs. Lec.**

Prerequisites: ECE 20/Psych 20. This course is designed for the development of curriculum for Early Childhood Education. Students will learn to establish

curriculum goals on the principle of child growth and development. Students will conduct teaching experiences for children which will include: cognitive development through language, movement and creative experiences. Observations and participation at area schools is required.

**ECE 24 (3)  
CREATIVE LEARNING EXPERIENCES  
FOR YOUNG CHILDREN  
3 Hrs. Lec.**

The course deals with the development, guidance and importance of creative activities for children. The course will show how to include art, music, dance, movement, drama, and puppetry in the curriculum. Creative materials and methods will be developed by each student. (Same as TA 24)

**ECE 25 (3)  
FIELD EXPERIENCE  
1 Hr. Lec. 10 Hrs. Field Experience**

Prerequisites: ECE/Psych 20, 21, 22 and 23AB. Supervised field work experience in the Early Childhood program. Provides practical opportunities to use knowledge, methods, skills gained in previous courses. Seminars cover class experiences, discussion of common problems, exchange of ideas, techniques and materials. Students may do their student teaching at their preschool place of employment.

**ECE 26 (3)  
THE ART OF PARENTING  
3 Hrs. Lec.**

This course is designed to provide parents and parents-to-be with practical down-to-earth methods of being good parents. While it is based on sound psychological principles, its content will not be theoretical but practical, giving examples and illustrations on aspects of sound parenthood. (Same as Psych 26)

**ECE 27 (3)  
UNDERSTANDING EXCEPTIONAL  
STUDENTS  
2 Hrs. Lec. 2 Hrs. Lab.**

(Same as Psych 27/P.L. 1)

**ECE 28 (3)  
ADMINISTRATION AND  
SUPERVISION IN EARLY  
CHILDHOOD EDUCATION  
3 Hrs. Lec.**

Prerequisites: ECE 20, 21, 22, 23, 24, 25. Application of basic management principles in preschools including State regulations, funding, budget preparation and policy writing. A director's responsibilities in hiring practices, staff management and facility maintenance. Parent involvement, community cooperation, program evaluation and assessment methods will be studied.

**ECE 29 (2)  
CHILD DEVELOPMENT ASSOCIATE  
INTRODUCTION & INITIAL  
ASSESSMENT  
1 Hr. Lec. 2 Hrs. Lab.**

An overview of the Child Development Associate program including history, training, credentialing and critical issues. Class open to anyone interested in CDA. The student completes a self-assessment based on the CDA functional areas and identifying both strong and weak areas. Assessment is based on the student's performance in the classroom.

**ECE 31 (2)  
CHILD DEVELOPMENT ASSOCIATE  
PORTFOLIO  
2 Hrs. Lec.**

The course includes the development of the Child Development Associate Portfolio. The student will demonstrate proficiency in each competency area.

**ECE 33 (1)  
SYSTEMATIC TRAINING FOR  
EFFECTIVE PARENTING (STEP)  
1 Hr. Lec.**

This course is designed for the development of skills essential to good parent-child relationships. The classes will deal with normal challenges to typical parents. Students will learn basic democratic child-rearing principles based on mutual respect, equality, and responsibility. Students will observe children and practice the basic skills necessary for effective parenting.

**ECE 34 (3)  
INFANT/TODDLER DEVELOPMENT  
3 Hrs. Lec.**

This course will cover the fundamental principles of prenatal and infant development from conception to age two. Emphasis is placed upon developing activities appropriate to the development level of the child based upon the student's understanding of infant/toddler development. The course is designed for caregivers and parents.

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**ECONOMICS**

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**ECON 1 (3)  
PRINCIPLES OF ECONOMICS  
3 Hrs. Lec.**

An introduction to economic concepts and the principles of economic analysis. Emphasis on economic institutions, issues of public policy; and macro-analysis in national income, money and banking, and economic stabilization.

**ECON 2 (3)  
PRINCIPLES OF ECONOMICS  
3 Hrs. Lec.**

An introduction to economic concepts and principles of economic analysis.

Emphasis on economic institutions, issues of public policy; and micro-analysis in the direction of production and the allocation of resources through the price-system.

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**EDUCATION**

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**ED 1 (2)  
INTRODUCTION TO EDUCATION  
1 Hr. Lec. 3 Hrs. Lab.**

Recommended for students interested in a teaching credential. Opportunity to explore specific grade levels through weekly observations and participation in actual classroom situations. Gives broad overview of the varied aspects of teaching.

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**ELECTRICITY**

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**ELECTRICITY 1 (3)  
BASIC ELECTRICITY  
2 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: Math 51 or satisfactory score on placement test. An introductory course to the study of electricity and electronics. Basic theory of the physical phenomena involved in the use and selection of various electrical components, instruments and circuits is presented in the lecture. Practical experiments demonstrating this theory are performed in the lab.

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**ELECTRONICS**

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**ELECTRONICS 1A (4)  
BASIC ELECTRONICS  
3 Hrs. Lec. 4 Hrs. Lab.**

Prerequisites: Electricity 1 or satisfactory score on the electronics screening examination and completion of Math 51 or satisfactory score on the placement examination. Course covers the fundamental characteristics of transistors and diodes; linear amplifiers and single stage amplifiers.

**ELECTRONICS 1B (3)  
ELECTRONICS ASSEMBLY AND  
FABRICATION  
2 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: Electronics 1A. A course to familiarize the electronics student with the tools, hardware and procedures used in the assembly and fabrication of electronics systems.

**ELECTRONICS 2 (5)  
TRANSISTORS AND SEMI-  
CONDUCTORS  
3 Hrs. Lec. 4 Hrs. Lab.**

Prerequisites: Electronics 1A and 1B. Study of the semi-conductor devices

and circuits with applicable network theorem circuits and propagation

**ELECTRONICS 5 (3)  
PRACTICAL DIGITAL E  
3 Hrs. Lec.**

Prerequisite: Electronics application of switching nonlinear solid-state systems circuits, truth tables a digital circuit analysis.

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**EMERGENCY MEDICAL**

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**EMT 1/A (5.5)  
EMERGENCY MEDICAL  
TECHNICIAN 1/AMBUL  
5 Hrs. Lec. 1.7 Hrs. Lab.**

A course for individuals with contact with sick or injured in an emergency situation aimed primarily for ambulance attendants, the course would assist to all emergency personnel in law enforcement, hospital emergency rescue units. Topics covered include the role and responsibilities of the Emergency Medical technician, medical-legal responsibilities, community resources for social care. Students will evaluate diagnostic signs, the extent of injuries. Procedures for dealing with life-threatening emergencies are presented: pulmonary resuscitation, hemorrhage. Other medical problems, environmental problems, lifting and moving techniques be considered. Student clinical laboratory experience in emergency rooms and calls. The course is approved by the California Department of EMT training. One hundred hours required for course: 87 hrs. Lec. (five) and 30 hrs. Lab.

**EMT 1/A(R) (1.5)  
EMERGENCY MEDICAL  
1/AMBULANCE REFRES  
1.5 Hrs. Lec. .4 Hrs. Lab.**

Prerequisite: EMT 1/A certification. A course for those whose EMT 1/A certification will expire within months (certification maintained more than twelve months course will review life support cardiopulmonary resuscitation and supplies. Specific procedures to Imperial County will be reviewed. Thirty-six hours required of course: 28 hrs. lec.; 8

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**EMT 1/FS (5)  
EMERGENCY MEDICAL TECHNICIAN  
1/FIRE SCIENCE**

**5 Hrs. Lec. 1 Hr. Lab.**

A course to prepare fire service personnel to render pre-hospital basic life support services, including cardiopulmonary resuscitation, to sick and injured persons under field emergency conditions. Preparation of the patient for transport is covered; however, actual transportation of patients in ambulances is not covered. (Certification as an EMT-1/A is required by law to work on an ambulance in California. EMT-1/FS certification does not meet this requirement). Topics covered include the role and responsibilities of the EMT, medico-legal aspects of emergency care, and patient evaluation. Students will learn how to take and evaluate vital signs, medical history, and field physical exam. Procedures for dealing with life-threatening emergencies are presented. Control of hemorrhage, childbirth, stroke, burns, and extrication are included. This course is approved by the State Board of Fire Services. 105 hours required for completion of course: 87 hrs. lec. (5 hrs. weekly); 18 hrs. lab.

**EMT 1/FS(R) (1)  
EMERGENCY MEDICAL TECHNICIAN  
1/FIRE SCIENCE REFRESHER**

**1.1 Hrs. Lec. .3 Hr. Lab.**

Prerequisite: Certification as a California EMT-1 or EMT-1/FS or EMT-1/PS which will expire in the next 6 months or has been expired less than 12 months. This is a recertification course for persons who hold a California EMT-1/A, EMT-1/FS or EMT-1/PS which will expire in the next 6 months or has expired within the last 12 months. The student will review material covered in the EMT-1 course, including field patient evaluation, cardiopulmonary resuscitation, airway maintenance, oxygen therapy, shock, hemorrhage, application of dressings, bandages and splints, immobilization techniques, extrication, lifting and moving techniques, emergency incident management, triage, and emergency childbirth. Discussion of new developments in emergency medical services will be included. Students intending to work on an ambulance must recertify as an EMT-1/A, which is a different course. 26 hours required for completion of course: 20 hrs. lec.; 6 hrs. lab.

**EMT 2-A (6)  
EMERGENCY MEDICAL TECHNICIAN  
2-A**

**4 Hrs. Lec. 4 Hrs. Lab.**

Prerequisite: Have a valid California Emergency Medical Technician 1 Ambulance Certificate. Have one year experience as an EMT 1. Have permission of instructor. The Emergency Medical Technician 2 is qualified by a compe-

tency based educational program of didactic, clinical and practice instruction and by a field internship in advanced emergency care services. It is the intent of the County Health Officer to ensure that EMT 2 personnel completing Imperial County (Imperial Valley College) training programs be adequately prepared with skills and competency, meeting or exceeding the latest statewide guidelines and/or standards.

**EMT 2-B (6)  
EMERGENCY MEDICAL TECHNICIAN  
2-B**

**4 Hrs. Lec. 4 Hrs. Lab.**

Prerequisite: EMT 2-A. The Emergency Medical Technician 2 is qualified by a competency based educational program of didactic, clinical and practice instruction and by a field internship in advanced emergency care services. It is the intent of the County Health Officer to ensure that EMT 2 personnel completing Imperial County (Imperial Valley College) training programs be adequately prepared with skills and competency, meeting or exceeding the latest statewide guidelines and/or standards.

**ENGINEERING**

**ENGR 2A (3)  
ENGINEERING DRAWING**

**1½ Hrs. Lec. 4½ Hrs. Lab.**

Prerequisite: Engr 21 or equivalent, or permission of the instructor. Geometric construction, sketching, dimensioning, theory of orthogonal projections and auxiliaries.

**ENGR 5 (3)  
STRENGTH OF MATERIALS**

**3 Hrs. Lec.**

Prerequisite: Engr 15. Axial stress. Stress and strain relations. Torsional stress and deformation. Shear and moment diagrams. Bending stresses. Shear stresses. Compound stresses. Transformation of stresses. Failure theory. Deflection of beams. Buckling. Statically indeterminate structures.

**ENGR 6 (3)  
ENGINEERING MATERIALS**

**3 Hrs. Lec.**

Prerequisite: Chem 1A. Atomic and molecular structure of materials utilized in engineering. Analysis of the relationships between structure of materials and their mechanical, thermal, electrical, corrosion and radiation properties, together with examples of specific application to engineering problems.

**ENGR 11 (3)  
ELECTRIC CIRCUITS**

**3 Hrs. Lec.**

Prerequisite: Credit or concurrent enrollment in Phys 4B and Math 3B. Circuit

analysis by reduction methods, source transformations, loop and nodal analyses, alternating current circuits, impedance, power and phasor diagrams.

**ENGR 12 (3)  
ARCHITECTURAL DRAFTING I**

**1 Hr. Lec. 5 Hrs. Lab.**

Prerequisite: Engr 2A or eligibility for Engr 2A. The course offers: basic elements in planning various areas of a residential structure and combining these areas into a composite functional plan; basic techniques and procedures needed in preparing architectural floor plans, foundation plans and pictorial drawings; local building regulations and California Building Code.

**ENGR 13 (3)  
ARCHITECTURAL DRAFTING II**

**1 Hr. Lec. 5 Hrs. Lab.**

Prerequisites: Engr 12 or equivalent. Technical architectural residential design including location plans, sectional drawings, foundation plans of various types, framing plans, specifications, electrical and air-conditioning plans, plumbing diagrams and modular construction plans, building codes. History of architecture.

**ENGR 14 (3)  
ARCHITECTURAL DRAWING III**

**1 Hr. Lec. 5 Hrs. Lab.**

Prerequisite: Engr 13 or equivalent. Working drawings for small commercial buildings. Planning merchandising facilities: banks, medical offices and clinics, food stores, restaurants and cafeterias, motels and parking facilities shopping centers, churches. Curtain-wall systems. Uniform Building Code Modern American architecture.

**ENGR 15 (3)  
STATICS**

**3 Hrs. Lec.**

Prerequisite: Phys 4A or concurrent enrollment in Phys 4A. Force systems Equilibrium. Structures. Distributed forces. Friction. Virtual work. Moment of inertia. Vector algebra.

**ENGR 16 (3)  
DYNAMICS**

**3 Hrs. Lec.**

Prerequisite: Engr 15. Kinetics of a particle. Central force motion. Systems of particles. Work and energy. Impulse and momentum. Moments and products of inertia. Euler's equations of motion. Vibration and time response. Engineering applications.

**ENGR 19 (6)  
STATICS AND DYNAMICS**

**6 Hrs. Lec.**

Prerequisite: Phys 4A. This course is combination of Engr 15 and Engr 16.

**ENGR 21 (3)**  
**TECHNICAL DRAWING**  
 1½ Hrs. Lec. 4½ Hrs. Lab.

A general course for students who have had no high school mechanical drawing. Covers proper use of drafting instruments, geometric constructions, lettering, orthographic projections, pictorial representations, isometric drawings, dimensions, and symbols.

**ENGR 23 (1)**  
**HAND CALCULATORS AND COMPUTATIONS**  
 1 Hr. Lec.

Prerequisite: Completion of Math X. Performing necessary manipulations with the calculator, while using correct methods to solve engineering and technical problems.

**ENGR 30 (2)**  
**ORIENTATION TO ENGINEERING**  
 2 Hrs. Lec.

Helping the engineering student adjust to college life through motivating experiences and guidance, clarifying concepts of the engineering college and the engineering profession, and aiding the student in acquiring the fundamental tools and skills required in future work.

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**ENGLISH**

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The Nelson-Denny Reading (Placement) Test should be taken by students prior to registration. The test will be administered in the Counseling Center and the Reading/Writing Lab. Scores on this test are used to determine the students' reading skills. Students will be tentatively enrolled in the appropriate classes based on the sequence detailed below. Concurrent enrollment in composition and reading classes is recommended.

Placement Grade Equivalency Score	Composition Class Recommendation
below 6.0	Eng 4
6.0 - 9.0	Eng 3AB
9.1 - 11.0	Eng 2AB
over 11.0	Eng 1A

Placement Grade Equivalency Score	Reading Class Recommendation
below 6.0	Eng 14AB
6.0 - 9.0	Eng 13AB
9.1 - 11.0	Eng 12AB
over 11.0	Eng 11

During the first week of class, students will be given an essay test to determine

their writing abilities. The results of this test, along with the Placement Test, will result in final placement of students in a composition class appropriate to their skills by the second week of the semester.

Students who receive a grade of C or higher in any of the above classes are automatically entitled to the next class in the sequence.

**ENG 1A (3)**  
**READING AND COMPOSITION**  
 3 Hrs. Lec.

Prerequisite: Satisfactory score on reading and writing placement tests and instructor recommendation. The standard course in freshman English. The course seeks to improve the student's ability to understand serious and complex prose and to improve the student's ability to write exposition that is thoughtful and clear.

**ENG 1B (3)**  
**INTRODUCTION TO LITERATURE**  
 3 Hrs. Lec.

Introduction to the study of poetry, fiction and drama, with further practice in writing. It is recommended that the student take Eng 1A before Eng 1B.

**ENG 2A (3)**  
**BASIC ENGLISH COMPOSITION**  
 3 Hrs. Lec.

Prerequisite: Assignment by placement test and instructor recommendation. Preparation for Eng 2B. Provides developmental instruction in paragraph and short essay writing and in reading composition and analysis approaching the college level. The course follows in sequence from Eng 3B and is taught simultaneously with Eng 2B. Concurrent enrollment in Eng 12A is strongly recommended. (Formerly Eng A)

**ENG 2B (3)**  
**BASIC ENGLISH COMPOSITION**  
 3 Hrs. Lec.

Prerequisite: Assignment by placement test and instructor recommendation. Preparation for Eng 1A. The course seeks to improve the student's mastery of the short essay and to teach reading comprehension and analysis at the college level. The course follows in sequence from, and is taught simultaneously with, Eng 2A. Concurrent enrollment in Eng 12B is strongly recommended. (Formerly Eng B)

**ENG 3A (3)**  
**WRITING FUNDAMENTALS**  
 3 Hrs. Lec.

Prerequisite: Assignment by placement test and instructor recommendation. Preparation for Eng 3B. Intensive instruction in grammar and punctuation and the writing of short paragraphs. Designed for the student needing to ac-

quire basic writing skills. Come language transfer. Follows in sequence from Eng 2A and is taught simultaneously with Eng 2B. Concurrent enrollment in Eng 12A is recommended. (Formerly Eng 1A)

**ENG 3B (3)**  
**WRITING FUNDAMENTALS**  
 3 Hrs. Lec.

Prerequisite: Assignment by placement test and instructor recommendation. Preparation for Eng 2A. Review of grammar and punctuation instruction in the writing and topic sentences. Designed for the student needing to review writing skills. The course follows in sequence from, and is taught simultaneously with, Eng 3A. Concurrent enrollment in Eng 13B is strongly recommended. (Formerly Eng 56B)

**ENG 4 (4)**  
**ADVANCED GRAMMAR AND COMPOSITION FOR ENGINEERS**  
 4 Hrs. Lec. 1 Hr. Lab.

Prerequisite: Satisfactory score on placement test or satisfactory completion of Eng 5 or 5B. Advanced grammar, and reading and writing. Satisfactory completion of Eng 3AB. This course satisfies the requirement in corequisite with Eng 42) (Formerly Eng 42)

**ENG 4A (2)**  
**ADVANCED GRAMMAR AND COMPOSITION FOR ENGINEERS**  
 2 Hrs. Lec. ½ Hr. Lab.

Prerequisite: Designated placement test or satisfactory completion of Eng 5 or Eng 5B. This course covers the first half semester of Eng 4 (4 units) and is offered for the convenience of night students who attend more than one night class. This course, together with Eng 4B, is equivalent to Eng 4. Not open to students who have completed Eng 42A)

**ENG 4B (2)**  
**ADVANCED GRAMMAR AND COMPOSITION FOR ENGINEERS**  
 2 Hrs. Lec. ½ Hr. Lab.

Prerequisite: Satisfactory completion of Eng 4A. This course covers the second half semester's work of Eng 4 and is offered for the convenience of night students who cannot attend more than one night per week. This course, together with Eng 4A, is the equivalent of Eng 4 and is required for the student to enroll in Eng 2. Not open to students who have completed Eng 4. (Formerly Eng 42B)

**ENG 5 (4)**  
**INTERMEDIATE GRAMMAR AND COMPOSITION FOR ESL**  
 4 Hrs. Lec. 1 Hr. Lab.

Prerequisite: Appropriate score on placement test or satisfactory completion of Eng 6. Eng 5 is an intermediate course in grammar and composition which takes the ESL student from simple present and past tense usage to more complicated grammatical structures. Basic skills for simple compositions in English are also taught. (Formerly Eng 41)

**ENG 5A (2)**  
**INTERMEDIATE GRAMMAR AND COMPOSITION FOR ESL**  
 2 Hrs. Lec. ½ Hr. Lab.

Prerequisite: Designated score on placement test or satisfactory completion of Eng 6B. The course covers the first half semester's work of Eng 5 (4 units) and is offered for the convenience of night students who cannot attend class more than one night per week. This course, together with Eng 5B, is equivalent to Eng 5. Not open to students who have completed Eng 5. (Formerly Eng 41A)

**ENG 5B (2)**  
**INTERMEDIATE GRAMMAR AND COMPOSITION FOR ESL**  
 2 Hrs. Lec. ½ Hr. Lab.

Prerequisite: Satisfactory completion of Eng 5A. This course covers the second half semester's work of Eng 5 (4 units) and is offered for the convenience of night students who cannot attend class more than one night per week. Satisfactory completion of Eng 5A and 5B is equivalent to Eng 5 and qualifies the student to enroll in Eng 4 or Eng 4A. Not open to students who have completed Eng 5. (Formerly Eng 41B)

**ENG 6 (4)**  
**BEGINNING GRAMMAR AND COMPOSITION FOR ESL**  
 4 Hrs. Lec. 1 Hr. Lab.

Prerequisite: Designated score on placement test. A beginning course in English designed for the student who has not had any formal English classes in the United States. The course will cover grammar and simple sentence writing. Capitalization and punctuation will be emphasized through some beginning composition writing in the latter part of the semester. (Formerly Eng 40)

**ENG 6A (2)**  
**BEGINNING GRAMMAR AND COMPOSITION FOR ESL**  
 2 Hrs. Lec. ½ Hr. Lab.

Prerequisite: Designated score on placement test or permission of instructor. This course covers the first half semester's work of Eng 6 (4 units) and is offered for the convenience of night students who cannot attend class more

than one night per week. This course will emphasize vocabulary building, conversational skills and listening comprehension. This course, together with Eng 6B, is equivalent to Eng 6. Not open to students who have completed Eng 6. (Formerly Eng 40A)

**ENG 6B (2)**  
**BEGINNING GRAMMAR AND COMPOSITION FOR ESL**  
 2 Hrs. Lec. ½ Hr. Lab.

Prerequisite: Eng 6A or permission of instructor. This course covers the second half semester's work of Eng 6 (4 units) and is offered for the convenience of night students who cannot attend class more than one night per week. Satisfactory completion of Eng 6A and 6B is the equivalent to Eng 6 and qualifies the student to enroll in Eng 5 or Eng 5A. Not open to students who have completed Eng 6. (Formerly Eng 40B)

**ENG 11 (3)**  
**READING IV: ANALYTICAL AND CRITICAL READING**  
 3 Hrs. Lec. \*1 Hr. Lab.

Prerequisite: Successful completion of Eng 12B and/or ability to read at the 11th grade level. Designed to help adequate readers become superior readers. Recommended for college transfer students who wish to develop the critical reading and thinking skills necessary for all types of college level reading. \*Laboratory hour to be scheduled in the Reading/Writing Lab. (Formerly Eng 12)

**ENG 12A (3)**  
**READING III: INTERMEDIATE DEVELOPMENT**  
 3 Hrs. Lec. \*1 Hr. Lab.

Prerequisite: Successful completion of Eng 13B and/or the ability to read at the 9th grade level. A course at the upper intermediate reading level designed to refine those skills designated in Eng 13A/13B. Includes additional instruction in study skills, outlining, previewing, summarizing and critical reading. \*Laboratory hour to be scheduled in the Reading/Writing Lab. (Formerly Eng 52A)

**ENG 12B (3)**  
**READING III: INTERMEDIATE DEVELOPMENT**  
 3 Hrs. Lec. \*1 Hr. Lab.

Prerequisite: Successful completion of Eng 12A and/or the ability to read at the 10th grade level. A course at the upper intermediate reading level for those students needing additional instruction and practice in study skills, outlining, previewing, summarizing and critical reading as taught in Eng 12A. \*Laboratory hour to be scheduled in the Reading/Writing Lab. (Formerly Eng 52B)

**ENG 13A (3)**  
**READING II: BASIC DEVELOPMENT**  
 3 Hrs. Lec. \*1 Hr. Lab.

Prerequisite: Successful completion of Eng 14B and/or the ability to read at the 6th grade level. A course at the lower intermediate level for the student needing intensive instruction in comprehension, vocabulary and study skills. Emphasis will be on fundamental understanding of texts, and increasing word knowledge. \*Laboratory hour to be scheduled in the Reading/Writing Lab (Formerly Eng 50A)

**ENG 13B (3)**  
**READING II: BASIC DEVELOPMENT**  
 3 Hrs. Lec. \*1 Hr. Lab.

Prerequisite: Successful completion of Eng 13A with reading scores below the required level for Eng 12A (grade 9). A course at the lower intermediate level for the student needing additional instruction in comprehension, vocabulary and study skills. Emphasis will be on fundamental understanding of texts, and increasing word knowledge. \*Laboratory hour to be scheduled in the Reading/Writing Lab. (Formerly Eng 50B)

**ENG 14A (3)**  
**READING I: DEVELOPMENT FOR BILINGUALS**  
 3 Hrs. Lec. \*1 Hr. Lab.

Prerequisite: Reading level below the 6th grade. Assignment by placement test and recommendation of the instructor. Course designed to develop reading efficiency of bilingual students. Phonics comprehension, word analysis, vocabulary building will be included, as well as those study skills directly related to reading. \*Laboratory hour to be scheduled in the Reading/Writing Lab. (Formerly Eng 49A)

**ENG 14B (3)**  
**READING I: DEVELOPMENT FOR BILINGUALS**  
 3 Hrs. Lec. \*1 Hr. Lab.

Prerequisite: Successful completion of Eng 14A with reading test scores below the required level for Eng 13A (grade 6). Course designed to develop reading efficiency of bilingual students. Phonics comprehension, word analysis, vocabulary building will be included, as well as those study skills directly related to reading. \*Laboratory hour to be scheduled in the Reading/Writing Lab. (Formerly Eng 49B)

**ENG 22AB (3-3)**  
**VOCABULARY BUILDING**  
 3 Hrs. Lec.

A concentrated study of affixes, roots, word origins, language change, varieties of meaning, the dictionary, and vocabulary in the various subject areas. (Formerly Eng 54AB)

**ENG 24 (3)**  
**ADVANCED VOCABULARY BUILDING AND SPELLING FOR ESL**  
**3 Hrs. Lec.**

Prerequisite: Eng 25, Eng 5, or by consent of instructor. The student will work on English-Spanish cognates, roots and prefixes, idioms, general reading vocabulary, subject matter (e.g., psychology, history), reading vocabulary, parts of speech, dictionary skills, word connotation and usage, and listening comprehension. The emphasis will be on writing and listening more than on oral work, and on independent vocabulary building as well as on group work. (Formerly Eng 47)

**ENG 25 (3)**  
**INTERMEDIATE VOCABULARY BUILDING AND SPELLING FOR ESL**  
**3 Hrs. Lec.**

Prerequisite: Eng 5 concurrently or consent of instructor. The intermediate ESL student will work on roots and prefixes, idioms, spelling, pronunciation, parts of speech, irregular verbs, and the learning of new words. A lot of class practice will be given in oral and written use of new words and expressions. (Formerly Eng 46)

**ENG 26 (3)**  
**BEGINNING VOCABULARY BUILDING AND SPELLING FOR ESL**  
**3 Hrs. Lec.**

Prerequisite: This course may be taken concurrently with Eng 6 or by permission of the instructor. A beginning level of vocabulary will be offered. Some spelling techniques will be taught and vocabulary will be used both in oral and written sentences. (Formerly Eng 45)

**ENG 33 (3)**  
**BASIC PUBLIC SPEAKING FOR BILINGUALS**  
**3 Hrs. Lec.**

Prerequisite: Eng 34 or permission of the instructor. This course is designed to bring advanced ESL students to a near-native level of fluency and listening comprehension so that they may successfully compete with native speakers. Students will prepare, present and evaluate speeches, commercials, dialogs, skits, oral interpretations, debates and simulation games. (This course may be taken as a preparation but not as a substitute for Sp 1) (Formerly Eng 44)

**ENG 34 (3)**  
**ADVANCED ORAL ENGLISH FOR ESL**  
**3 Hrs. Lec.**

Prerequisite: To be taken concurrently with Eng 4 or by permission of instructor. An intensive course in oral American English for students who have learned English as a second language. It is intended for students who may read well

and have a good grasp of grammar but who still need more practice in manipulating oral structures. (Formerly Eng 43C)

**ENG 35 (3)**  
**INTERMEDIATE ORAL ENGLISH FOR ESL**  
**3 Hrs. Lec.**

Prerequisite: To be taken concurrently with Eng 5 or by permission of the instructor. A conversational course designed for the intermediate student of ESL. Students will utilize oral English by creating their own dialogs and presenting them, and by speaking on posters or other visual materials. Differences between the students' native language and English and how these differences affect the students' oral English will be discussed. (Formerly Eng 43B)

**ENG 36 (3)**  
**BEGINNING ORAL ENGLISH FOR ESL**  
**3 Hrs. Lec.**

Prerequisite: To be taken concurrently with Eng 6 or by permission of the instructor. A conversational course designed for the beginning ESL student. The course will cover the fundamentals of the English sound system. Listening and speaking will be emphasized through basic dialogs to be learned, through simple stories to be listened to, and through questions to be answered orally. (Formerly Eng 43A)

**ENG 41 (3)**  
**SURVEY OF AMERICAN LITERATURE**  
**3 Hrs. Lec.**

Prerequisite: Eng 1B is recommended. A study of the works of major American writers. (Formerly Eng 15)

**ENG 42A (3)**  
**SURVEY OF WORLD LITERATURE**  
**3 Hrs. Lec.**

Prerequisite: Eng 1B is recommended. Study of selected literature of the Hebrews, Greeks, Romans, the Middle Ages, and the Renaissance. Emphasis on literature other than American and English. (Formerly Eng 16A)

**ENG 42B (3)**  
**SURVEY OF WORLD LITERATURE**  
**3 Hrs. Lec.**

Prerequisite: Eng 1B is recommended. Study of selected literature of Neoclassicism, Romanticism, Naturalism, Symbolism, and modern schools. Emphasis on literature other than American and English. May be taken before Eng 42A. (Formerly Eng 16B)

**ENG 43A (3)**  
**SURVEY OF ENGLISH LITERATURE**  
**3 Hrs. Lec.**

Prerequisite: Eng 1B or permission of the instructor. Close study of works of major English writers up to the end of the

18th century, with consideration of more important aspects of Early history. (Formerly Eng 17)

**ENG 43B (3)**  
**SURVEY OF ENGLISH LITERATURE**  
**3 Hrs. Lec.**

Prerequisite: Same as for Eng 43A. Close study of works of major English writers of the 19th and 20th centuries, with consideration of the most important aspects of English literature. May be taken before Eng 43A. (Formerly Eng 17B)

**ENG 44ABCDEF (3-3-3-3-3-3)**  
**LITERATURE FOR APPRECIATION**  
**3 Hrs. Lec.**

Prerequisite: Completion of Eng 13A or the equivalent. A mirror-image grade reading level is recommended. This general education course designed to encourage students to read and understand and for an increased understanding of themselves and the world in which they live. Students will read short stories, plays, poetry and some novels on certain themes, e.g., youth, horror, fantasy, the hero, the West. Participation will be emphasized. Writing will be required. Guest lecturers, films, and field trips will be used whenever possible. Course may be repeated for credit with different content. (Formerly Eng 18ABCDEF)

**ENG 45ABCDEF (3-3-3-3-3-3)**  
**STUDIES IN LITERATURE**  
**3 Hrs. Lec.**

Examination of representative works of a major author, period, or theme; or comparative study of literature and another field, e.g., film, art, music, politics, social or behavioral science. Topics such as Modern Prose, Fiction, Modern Drama, Classic Theater, Introduction to Shakespeare, Film and Literature, The History of Literature, Mythology and Folklore. May be repeated with different content. (Formerly Eng 20ABCDEF)

**ENG 46A (3)**  
**THE MEXICAN AMERICAN IN AMERICAN LITERATURE**  
**3 Hrs. Lec.**

Prerequisite: Eligibility for English 101. Study of the contributions by Mexican Americans to all genres of literature. Course to be developed through the study of the Mexican American cultural backgrounds, and by comparing the works of Mexican Americans with their familiar American counterparts, as well as the works of familiar Mexican American authors. This course will concentrate on cultural and literary heritage of the Mexican American. Conducted in English as Span 28A) (Formerly Eng 19)



**ENG 46B (3)  
THE MEXICAN AMERICAN IN  
LITERATURE****3 Hrs. Lec.**

Prerequisite: Eligibility for Eng 1A. A continuation of Eng 46A with emphasis on contemporary Mexican American writers. Conducted in English. Eng 46B may be taken before Eng 46A. (Same as Span 28B) (Formerly Eng 30B)

**ENG 47 (3)  
INTRODUCTION TO THE BIBLE AS  
LITERATURE****3 Hrs. Lec.**

A study of the prose and poetry of the Bible. (Formerly Eng 36)

**ENG 50 (3)  
ADVANCED COMPOSITION****3 Hrs. Lec.**

Prerequisite: Eng 1A. Advanced expository prose, argumentation, description and the study of prose style. (Formerly Eng B)

**ENG 51 (3)  
THE COMMUNICATION PROCESS****3 Hrs. Lec.**

Prerequisite: Assignment by placement test or instructor recommendation. Designed to familiarize the student with everyday communication processes and to develop his/her ability to respond to them critically. Includes analysis of typical media (TV, radio, newspapers, magazines, and other popular literature) and participation in simulation games on matters of social concern. Offers practice in the use of the library and in oral and written communication, especially in the writing of single and multiparagraph reports, essays and letters.

**ENG 52 (3)  
INTRODUCTION TO LINGUISTICS****3 Hrs. Lec.**

Prerequisite: Eng 2B, Eng 51, Eng 1A or consent of the instructor. Introduction to the various branches of linguistics: language classification, dialectal variation, psycholinguistics, sociolinguistics, semantics. Specific work on English sounds, grammar, and dialects, including comparisons of English with Spanish. Recommended for teachers, teacher aides, students of foreign languages, and anyone interested in extending his/her knowledge of language. Suitable for English speaking and bilingual students. (Formerly Eng 2)

**ENG 53AB (3-3)  
CREATIVE WRITING****3 Hrs. Lec.**

Prerequisite: Eng 1B or permission of the instructor. Study and application of the principles of literary construction, plus exercises in the writing of imaginative literature, including short story, poetry, drama, and essay. (Formerly Eng 9AB)

**ENG 54 (3)  
INTRODUCTION TO FILM HISTORY  
AND CRITICISM****2 Hrs. Lec. 2 Hrs. Lab.**

The origin and development of movies as an entertainment industry, as a technological medium, and as an art form. Key films from different historical periods will be examined for their technological and artistic contributions to the art of film making. (Same as Hum 54, MPP 54) (Formerly Eng 3)

**ENG 55 (3)  
TECHNICAL AND REPORT WRITING****3 Hrs. Lec.**

Prerequisite: Eng 51, Eng 2AB, Eng 1A, or permission of the instructor. Practical experience in writing various kinds of technical reports, descriptions, and evaluations; writing assignments fitted to the interests of individual students. (Formerly Eng 7)

**ENG 56 (3)  
INTRODUCTION TO MOTION  
PICTURE PRODUCTION****3 Hrs. Lec. Plus production practice hours to be arranged**

(Same as MPP 10) (Formerly Eng 10)

**ENG 59 (3)  
GRAMMAR AND USAGE REVIEW****3 Hrs. Lec.**

Prerequisite: Placement at Eng 2A level or above. Review of traditional/structural grammar; review of usage rules regarding punctuation, mechanics, capitalization; review of spelling rules; practice with summary/report writing done by the student.

**ENG 60ABC (1-1-1)  
LANGUAGE LABORATORY****2 Hr. Lab.**

(Same as Fr 60AC and Span 60AC)

**ENG 61AL (1)  
INDIVIDUALIZED WRITING****2 Hrs. Lab.**

This is a course in individualized instruction under the auspices and direction of a certificated instructor who diagnoses writing deficiencies and prescribes remediation. Individual learning modules are assigned for improving such things as: grammar, usage, rhetorical skills and to eliminate language interference. The course is designed to assist students in any course(s) requiring writing skills. The 36 required hours will be set by arrangement with the student and must be undertaken in the Reading/Writing Lab. (Formerly Eng 58AL)

**ENG 62AL (1)  
INDIVIDUALIZED READING****2 Hrs. Lab.**

This is a course in individualized instruction under the auspices and direction of a certificated instructor who diagnoses

reading deficiencies and prescribes remediation. Individual learning modules are assigned for improving such things as: reading vocabulary, reading comprehension and reading rate. The course is designed to assist students in any course(s) requiring reading skills. The 36 required hours will be set by arrangement with the student and must be undertaken in the Reading/Writing Lab. (Formerly Eng 53AL)

**ENG 63AB (1-1)  
SPELLING****1 Hr. Lec.**

Diagnosis of specific spelling problems and prescription of remedies; investigation of the basic spelling rules. (Formerly Eng 55AB)

**ENG 64 (1)  
LIBRARY RESOURCES****1 Hr. Lec.**

Use of library facilities, especially the card catalog, reference books, and periodical indexes, as a basis for research in any field. Techniques of preparing and presenting a research paper are included. Work on an actual term paper is not required although students may use this course to assist them in writing a research (term) paper for other courses if they wish. Helpful to any individual from the community who wishes to use the library to keep up to date on the latest developments and to compile a bibliography in his/her area(s) of interest. (Formerly Eng 57)

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**ENVIRONMENTAL SCIENCE**

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**ENV SCI 5 (3)  
MAN AND HIS ENVIRONMENT****3 Hrs. Lec.**

The study of natural resources vital to man's existence. Emphasis on composition of the physical environment and problems associated with contamination of air, water, and soil. (Same as Ag 5)

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**FIRE SCIENCE**

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**FIRE SCI 17 (1)  
EMERGENCY FIRE/MEDICAL  
DISPATCHER****1 Hr. Lec. .5 Hr. Lab.**

Prerequisite: Current CPR card. A course to train public safety dispatchers to quickly and accurately interrogate callers requesting medical aid, fire units or rescue services, and dispatch proper emergency vehicles and personnel. Communication between field units and dispatchers, pre-arrival instructions, triage calls, basic life support, record keeping, FCC regulations and roles and responsibilities of dispatcher will be covered.

**FIRE SCI 40 (1)  
INCIDENT COMMAND SYSTEM****1 Hr. Lec.**

This course is designed to thoroughly familiarize emergency services personnel with the design components and organization of the Incident Command System. It enables the student to effectively use the Field Operations Guide (FP 420-1).

**FIRE SCI 50 (2)  
VOLUNTEER FIREFIGHTING  
PRACTICE****2 Hrs. Lec.**

A course designed for volunteer firefighters. This course is designed to provide all the basic operational skills needed by firefighters in a volunteer service.

**FIRE SCI 60 (3)  
INTRODUCTION TO FIRE  
TECHNOLOGY****3 Hrs. Lec.**

An introduction to fire protection; career opportunities in fire protection and related fields; history of fire protection; fire loss analysis; public, quasi-public and private fire protection services; specific fire protection functions; basic fire chemistry and physics.

**FIRE SCI 61 (3)  
FUNDAMENTALS OF FIRE  
PREVENTION****3 Hrs. Lec.**

Organization and function of fire prevention; inspections; surveying and mapping procedures; recognition of fire and life hazards; engineering a solution of a fire hazard; enforcing the solution of a fire hazard; public education aspects of fire prevention.

**FIRE SCI 62 (3)  
FIRE PROTECTION EQUIPMENT  
AND SYSTEMS****3 Hrs. Lec.**

A course on the features of design and operation of fire detection and alarm systems, heat/smoke control systems, special protection and sprinkler systems, water supply and portable fire extinguishers.

**FIRE SCI 63 (3)  
FUNDAMENTALS OF FIRE BEHAVIOR  
AND CONTROL****3 Hrs. Lec.**

A course encompassing theory and fundamentals of how fires start, spread and are controlled. An in-depth study of fire chemistry and physics, fire characteristics of materials, extinguishing agents and fire control techniques.

**FIRE SCI 64 (3)  
FUNDAMENTALS OF FIRE  
PROTECTION****3 Hrs. Lec.**

The theory and fundamentals of fire protection, including fire protection

laws, water systems and public fire protection systems; fire protection in buildings and open areas.

**FIRE SCI 65 (3)  
FUNDAMENTALS OF PERSONAL FIRE  
SAFETY AND EMERGENCY ACTION****3 Hrs. Lec.**

A course designed to provide basic skills in assessing fire dangers, handling common fire situations in the home and/or industry, basic CPR and Standard First Aid.

**FIRE SCI 70 (2)  
FIRE MANAGEMENT I****2 Hrs. Lec.**

The fundamentals of officer leadership and supervisory techniques. Introduces fire service personnel to the principles of company supervision, personnel management, evaluation and training.

**FIRE SCI 71 (2)  
FIRE MANAGEMENT II****2 Hrs. Lec.**

Prerequisite: Fire Sci 70. This course is a continuation of Fire Management I, and prepares fire service personnel in the principles of company supervision, personnel management, and evaluation and training techniques with a particular emphasis on methods of developing, utilizing instructional materials, and efficient teaching methodology.

**FIRE SCI 72 (2)  
FIRE MANAGEMENT III****2 Hrs. Lec.**

This course provides the specific managerial skills required of a fire company officer or chief fire officer in a fire service unit. It includes methods and procedures of personnel management from routine through emergency conditions and situations in the fire service unit.

**FIRE SCI 73 (1)  
VOLUNTEER INSTRUCTOR  
TRAINING****1 Hr. Lec.**

Designed for volunteer fire personnel with a responsibility for training. Emphasizes the teaching and evaluation of manipulative skills employed by the fire service.

**FIRE SCI 90 (2)  
PUMP OPERATION I****2 Hrs. Lec.**

Prerequisite: Suggested completion of Fire Sci 60 or Fire Sci 62. A basic course for engineers in the fire fighting service which provides the background in general use and operation of pumping and related equipment.

**FIRE SCI 92 (2)  
ARSON INVESTIGATION I****2 Hrs. Lec.**

Prerequisite: Present firefighting either paid or volunteer. This course is designed for the fire and police investigator to successfully perform responsibilities in arson detection and investigation.

**FIRE SCI 94 (2)  
FIRE COMMAND I****2 Hrs. Lec.**

Prerequisite: Present firefighting either paid or volunteer. A course designed to provide Fire Company personnel with information and experience in fire command and control techniques at the scene of an emergency. The course emphasizes decision making, fire commanding, the authority of fire command, the personnel organization structure or area under an officer's command, and the pre-planned training requirements for effective performance as an officer.

**FIRE SCI 95ABCDE (1/2-1/2-1/2-1/2-1/2)  
OIL FIRE CONTROL SCHOOL****.2 Hr. Lec. .8 Hr. Lab.**

This course provides students with general information, techniques and principles in dealing with flammable liquids and gases. Students are provided with particular exercises in controlling fires in extinguishing flammable and gas fires at selected burn sites under controlled supervision.

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**FOOD SERVICES**

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**FST 1 (2)  
INTRODUCTION TO BASIC  
AND FOOD SERVICES****1 Hr. Lec. 2.5 Hrs. Lab.**

An overview of the basic skills involved in preparing and serving foods in child care centers, day care centers and commercial establishments.

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**FRENCH**

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High school foreign language courses may be used for purposes of placement in college courses and may be used toward meeting the foreign language requirement in various majors. The credit from school courses will not count toward graduation. Placement may be made by examination and/or by the instructor. Contact the Language Department for further information.

The last year course taken by a student in the high school language

quence may be repeated in college for graduation credit, not to exceed four units of repeated foreign language work. Students are strongly advised to see the instructor before enrolling.

Students who have recently studied French for three years in high school are recommended to take Fr 3 and Fr 10.

**FR 1 (4)  
ELEMENTARY FRENCH  
4 Hrs. Lec. 1 Hr. Lab.**

An intensive beginning course stressing the basic skills of listening comprehension, speaking, reading and writing to develop control of the sounds and the basic forms and structure of French. Introduction to aspects of French culture and civilization. Students must plan for an additional hour of individual language laboratory by arrangement. Not open to students who have completed three years of high school French.

**FR 1A (2)  
ELEMENTARY FRENCH  
2 Hrs. Lec. ½ Hr. Lab.**

This course is one-half the content of the regular Fr 1 course. Completion of Fr 1A and 1B will be the equivalent of Fr 1, and the total of 4 units. Students must plan for an additional one-half hour of individual language laboratory by arrangement.

**FR 1B (2)  
ELEMENTARY FRENCH  
2 Hrs. Lec. ½ Hr. Lab.**

Prerequisite: Fr 1A. A continuation of Fr 1A. Students must plan for an additional one-half hour of individual language laboratory by arrangement.

**FR 2 (4)  
ELEMENTARY FRENCH  
4 Hrs. Lec. 1 Hr. Lab.**

Prerequisite: Fr 1 or placement by examination. Continues the development of all four language skills, emphasizing vocabulary building, increasing fluency and control of correct pronunciation, basic forms and structure. Students must plan for an additional hour of individual language laboratory by arrangement.

**FR 2A (2)  
ELEMENTARY FRENCH  
2 Hrs. Lec. ½ Hr. Lab.**

Prerequisite: Fr 1B or placement by examination and consent of instructor. This course is one-half the content of the regular Fr 2 course. Completion of Fr 2A and 2B will be the equivalent of Fr 2, and the total of 4 units. Students must plan for an additional one-half hour of individual language laboratory by arrangement.

**FR 2B (2)  
ELEMENTARY FRENCH  
2 Hrs. Lec. ½ Hr. Lab.**

Prerequisite: Fr 2A. A continuation of Fr 2A. Students must plan for an additional one-half hour of individual language laboratory by arrangement.

**FR 3 (4)  
INTERMEDIATE FRENCH  
4 Hrs. Lec. 1 Hr. Lab.**

Prerequisite: Fr 2 or placement by examination. An intermediate course giving intensive practice in speaking, understanding, reading and writing to further develop control of the sounds and basic structure of French. A thorough review of essential grammar. Reading in French of cultural material, short stories, plays, poetry or novels; guided compositions and oral practice. Students must plan for an additional hour of individual language laboratory by arrangement.

**FR 4 (4)  
INTERMEDIATE FRENCH  
4 Hrs. Lec. 1 Hr. Lab.**

Prerequisite: Fr 3 or placement by examination. Continuation of intensive practice in speaking, understanding, reading and writing based on cultural and literary materials. Vocabulary and oral-written correspondence stressed; outside reading with oral and written reports. Students must plan for an additional hour of individual language laboratory by arrangement.

**FR 5 (2)  
INTERMEDIATE FRENCH READING  
AND GRAMMAR REVIEW  
1 Hr. Lec. 3 Hrs. Lab. to be arranged**

Prerequisite: Fr 2 or two years of high school French or consent of instructor. Intermediate French Reading and Grammar Review Lab: Independent and individualized study. SRA reading comprehension exercises, speed reading exercises, vocabulary development and research. Supplementary listening comprehension and pronunciation exercises on tape. Independent grammar review with self-checking quizzes.

**FR 10 (3)  
INTERMEDIATE CONVERSATIONAL  
FRENCH  
3 Hrs. Lec.**

Prerequisites: Fr 2 or two years of French in high school or by examination and consent of instructor. (It is recommended that Fr 10 be taken concurrently with Fr 3.) Practical conversational skills are developed through listening exercises, directed conversations on assigned readings from newspaper and magazine articles, current topics, simple dialogues and plays. Emphasis on contemporary life in countries where French is spoken. Student must plan for an additional hour of individual language laboratory by arrangement.

**FR 11 (3)  
INTERMEDIATE CONVERSATIONAL  
FRENCH  
3 Hrs. Lec.**

Prerequisite: Fr 3 or Fr 10 or three years of French in high school or by examination and consent of instructor. (It is recommended that Fr 11 be taken concurrently with Fr 4.) Continuation of Fr 10. Student must plan for an additional hour of individual language laboratory by arrangement.

**FR 20A (2)  
FRENCH DRAMA—READING AND  
PERFORMANCE  
1 Hr. Lec. 3 Hrs. Lab.**

Prerequisite: Fr 2 or two years of high school French or consent of instructor. Oral reading and performance of French plays and skits. Includes vocabulary development and fluency in the spoken language. One selection of a one-act play or skit will be studied in-depth and performed for students of French.

**FR 20B (2)  
FRENCH DRAMA—READING AND  
PERFORMANCE  
1 Hr. Lec. 3 Hrs. Lab.**

Prerequisites: Fr 20A or equivalent experience of Fr 2 and consent of instructor. Continuation of Fr 20A.

**FR 40 (3)  
INTRODUCTION TO FRENCH  
CIVILIZATION AND CULTURE  
3 Hrs. Lec.**

An introduction to French civilization and culture. The major currents and characteristics of French culture and its development as expressed through the centuries in literature, art, philosophy, music, science, politics, history and life of the people from pre-history to the 20th century. Conducted in English. (Same as Hum 40)

**FR 41 (3)  
INTRODUCTION TO FRENCH  
CIVILIZATION AND CULTURE  
BEYOND FRANCE  
3 Hrs. Lec.**

Cultural aspects and developments of French speaking people, their customs, traditions, literature, art, music, philosophy, government and economy. Brief studies of Canada, African countries, Tahiti, Haiti, Louisiana, Martinique, Guadelupe. Emphasis on the 20th century. Conducted in English. (Same as Hum 41)

**FR 60ABC (1-1-1)  
LANGUAGE LABORATORY  
2 Hrs. Lab.**

(Same as Eng 60AC and Span AC)

**GEOGRAPHY****GEOG 1 (3)  
PHYSICAL GEOGRAPHY  
3 Hrs. Lec.**

An introduction to the physical characteristics of the earth. Topics include: climate, land forms, natural vegetation, and the water and mineral resources of the earth.

**GEOG 2 (3)  
CULTURAL GEOGRAPHY  
3 Hrs. Lec.**

An introduction to the regions and cultures of the world. Emphasis on the contemporary demographic, linguistic, religious, and economic characteristics of major regions in the world. May be taken before Geog 1.

**GEOG 3 (3)  
ECONOMIC GEOGRAPHY  
3 Hrs. Lec.**

The geography of commercial products. Distribution of production as related to climate, surface features, soils, labor supply and market areas, and the routes along which products move to consuming areas.

**GEOLOGY****GEO 1A (4)  
PHYSICAL GEOLOGY  
3 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: One year of high school science or permission of instructor. Destructive and constructive work of water, ice and wind; earthquakes and the earth's interior; volcanoes and geysers; rocks and rock formations; mineral resources, coral islands; origin and history of the larger topographic features.

**GEO 10 (3)  
LIFE OF THE PAST: AN  
INTRODUCTION TO  
PALEONTOLOGY  
3 Hrs. Lec.**

Prerequisite: One year of high school science. Biological principles of evolutionary development and types of fossils recorded in the rocks from ancient times to present. The age of invertebrates; the age of dinosaurs and other reptiles; the age of birds; the age of mammals. (Same as Zool 10)

**GEO 11 (3)  
GENERAL GEOLOGY: AN  
INTRODUCTION TO GEOLOGY  
3 Hrs. Lec.**

Prerequisite: One semester of high school science recommended. The basic elements of physical and historical geology. Study of rocks and fossils; their

meaning and origins. Origin of the earth, volcanics, tectonics, earthquakes and geologic time. The building of mountains; erosion by wind and water. Glaciers and their activities, climatic changes through time, the changing landscape. Emphasis on the geology of the Imperial Valley. A general education course closed to those who have credit in Geol 1A or Geol 1B.

**GEO 12 (3)  
INTRODUCTION TO HISTORICAL  
GEOLOGY  
3 Hrs. Lec.**

Prerequisite: One semester of high school science recommended. Origin and evolution of the earth, solar system and universe. Measurement of geologic time: the geologic periods. Typical fossils and organic evolution. Survey of paleogeography and paleoecology. Biological and geological principles in a historical perspective. Emphasis on past events in Imperial Valley. A general education course closed to those who have credit in Geol 1B, Historical Geology.

**GEO 12L (1)  
INTRODUCTION TO GEOLOGY LAB  
3 Hrs. Lab.**

Prerequisite: Geol 12 or concurrent registration in Geol 12. Origin and evolution of the earth, solar system and universe. Measurement of geologic time: the geologic periods. Typical fossils and organic evolution. Survey of paleogeography and paleoecology. Biological and geological principles in an historical perspective. Emphasis on past events in Imperial Valley. A general education course closed to those who have credit in Geol 1B.

**GEO 13 (3)  
GEOLOGY OF CALIFORNIA  
3 Hrs. Lec.**

Prerequisites: One semester of high school science or permission of instructor. A study of geologic history of California, the geology of its physiographic provinces and the origin and development of its scenic landscapes. Land forms, plate tectonics, earthquakes: their cause and prediction.

**GEO 14 (3)  
GENERAL PALEONTOLOGY,  
DINOSAURS, SABRETOOTHS  
AND MAN  
3 Hrs. Lec.**

Prerequisites: Geol 10, Geol 12, or Zool 1B. The history of life on earth from microbe to man as seen in the fossil record. The origins and evolution of invertebrates, vertebrates and plant life. Study of extinction and its causes. Emphasis on paleoecology and knowledge from the past applied to the present and future. Fossil fuels, their origin and distribution. A general education course intended for non-majors.

**GERMAN****GER 1 (4)  
ELEMENTARY GERMAN  
4 Hrs. Lec. 1 Hr. Lab.**

Pronunciation, practice in introduction to reading and writing grammar of the German language. Student must plan for an additional hour of individual language lab.

**GER 1A (2)  
ELEMENTARY GERMAN  
2 Hrs. Lec. ½ Hr. Lab.**

Beginning course of graded lessons acquainting the student with the structure and pronunciation practice in speaking, reading and writing. This course is the first half of a semester of Ger 1. Completion of Ger 1A and Ger 1B is the equivalent of a total of 4 units. Students must plan for an additional one-half hour of individual language laboratory by arrangement.

**GER 1B (2)  
ELEMENTARY GERMAN  
2 Hrs. Lec. ½ Hr. Lab.**

Continuation of Ger 1A. Student must plan for one-half hour of individual language laboratory by arrangement.

**GER 2 (4)  
ELEMENTARY GERMAN  
4 Hrs. Lec. 1 Hr. Lab.**

Prerequisites: Ger 1 or by placement examination. An intensive, methodical presentation to develop facility in the use of listening, comprehension, speaking, reading and writing with controlled basic structures in both oral and written form. German culture and civilization will be introduced. Students must plan for an additional one-half hour of individual language laboratory by arrangement.

**GER 10 (3)  
CONVERSATIONAL GERMAN  
3 Hrs. Lec.**

Prerequisites: Ger 1 and 2 or by placement examination and consent of instructor. Conversational skills developed through drills, laboratory assignments and recorded conversations on assigned topics. Practice in the spoken language, idiomatic and diplomatic vocabulary, dialogues and plays. Meets the conversation requirements for placement in upper division courses. Student must plan for an additional hour of individual language laboratory by arrangement.

**GER 11 (3)  
CONVERSATIONAL GERMAN  
3 Hrs. Lec.**

Prerequisites: Ger 2 or Ger 10. This course is a continuation of Ger 10. Students must plan for two additional hours of individual language laboratory by arrangement.

**GERONTOLOGY**

**GERONTOLOGY 1 (3)  
FUNDAMENTALS OF AGING**  
3 Hrs. Lec.

An introduction to aging including the physical, psychological and sociological changes in the aging process.

**GERONTOLOGY 2 (3)  
SOCIOLOGY OF AGING**  
3 Hrs. Lec.

The interactions of group processes in the family and community which influence our society's attitudes toward the aging process. The institutional, environmental and cultural diversities of our society encountered in dealing with the aging.

**GERONTOLOGY 3 (3)  
PSYCHOLOGY OF AGING**  
3 Hrs. Lec.

A developmental approach to the study of aging. An examination of behavior patterns in aging; changes in sensation, perception, and cognition processes; and the biological and environmental influence on behavior in older adults.

**GERONTOLOGY 4 (3)  
BIOLOGY OF AGING**  
3 Hrs. Lec.

The course is designed to acquaint the student with the structural and functional changes that occur in the human body during the process of aging. Declines, losses and biomedical changes associated with the various systems of the body will be covered. Current biological theories of aging will be introduced. Diseases related to aging, with their related symptoms and treatments will be discussed. The psychological and social implications of biological changes, deficiencies and diseases will be stressed.

**GERONTOLOGY 5 (3)  
AGING AND THE QUALITY OF LIFE**  
3 Hrs. Lec.

The course is designed to show that life for the aged is not just existence, but can be a vital, rewarding and fulfilling life that continues on into the later years that have been labeled as aged by our society.

**GERONTOLOGY 11 (2)  
GERONTOLOGY PRACTICUM**  
1 Hr. Lec. 6 Hrs. Lab.

Prerequisites: Geron 1 and one of the following which may be taken concurrently, Geron 2, Geron 3 or Geron 4. Field experience enabling the student to apply theory in settings serving the older adult: senior centers, extended care facilities, governmental agencies, etc. Placement will be in the student's area of specialization.

**GERONTOLOGY 19 (3)  
THE PSYCHOLOGY OF LOSS**  
3 Hrs. Lec.  
(Same as Psych 19)

**GRAPHIC ARTS**

**G.A. 10 (2)  
GRAPHIC COMMUNICATION I**  
1 Hr. Lec. 3 Hrs. Lab.

Prerequisites: Art 22A or equivalent is recommended. A course designed to be a guide for the preparation of art and the mechanics for reproduction in the graphic arts field. The emphasis is on advertising and studio skills. This course will cover newspaper ads, brochure layout, pasteup, camera-ready art work, color separation and design coordination.

**G.A. 11 (3)  
GRAPHIC COMMUNICATION II**  
2 Hrs. Lec. 1 Hr. Lab.

Prerequisite: G.A. 10. A continuation in the preparation of art and mechanics for reproduction in the graphic art field. Emphasis is on advertising and studio skills. An in-depth study of reproduction art in conjunction with offset printing. Student must plan for two additional hours by arrangement.

**G.A. 12 (3)  
COMPOSITION, LAYOUT AND PASTE-UP**  
2 Hrs. Lec. 3 Hrs. Lab.

Prerequisite: G.A. 10. A course designed to cover basic methods of composition as it applies to the printing industry, including copysetting, proofreading and paste-up techniques. This course will cover effective uses of related material, techniques, creative thinking and innovative practices through the use of demonstrations, projects and laboratory experiences.

**G.A. 20 (3)  
OFFSET PRINTING I**  
2 Hrs. Lec. 2 Hrs. Lab.

Study of the principles of offset presswork at the elementary level. Instruction in operation of offset presses under 11 x 17 inches. Students print simple offset work, color work and close-register. This course will also offer instruction in the theory of offset press trouble shooting, including standard trouble shooting procedures.

**G.A. 21 (3)  
OFFSET PRINTING II**  
2 Hrs. Lec. 2 Hrs. Lab.

Prerequisite: G.A. 20. An advanced course in lithographic presswork which allows the student to apply the lithographic theory and experience he has

gained by operating equipment using sheets 4 x 6 in. up to 11 x 17 in. with emphasis in loading and setting feeds, conveyor mechanism, and guides, the proper preparation of stock and packing clamps, the mounting of plates and blankets, the setting of dampeners, ink rollers, fountain, and grippers. Pressure adjustments are stressed. Camera operations for the lithography process are introduced. Student must plan for two additional hours by arrangement.

**G.A. 22 (3)  
PHOTOGRAPHY AND PLATE MAKING**  
2 Hrs. Lec. 2 Hrs. Lab.

Current techniques and equipment in photography and platemaking as final preparation before offset printing. Covers effective use of materials and techniques in darkroom, stripping and platemaking departments.

**G.A. 23 (2)  
BINDERY, CUTTING AND DISTRIBUTION**  
1 Hr. Lec. 2 Hrs. Lab.

This course offers instruction in finishing operations on printed materials, training in the operation of folding machines, slitting, perforating, and troubleshooting, training in the operation of hand and power cutters, special trimming, trimming of booklets and printed matter, cutting of blank stock, collating machine, stapling and stitching, hole-punching, jogging and padding procedures.

**G.A. 30 (3)  
GRAPHICS PLANT OPERATION AND MANAGEMENT FUNDAMENTALS**  
3 Hrs. Lec. 2 Hrs. Lab.

A course designed to acquaint the student with all phases of the small printing shop operation. The course emphasis will be production control, cost control, estimating and quoting, sales and general management techniques used in the day-to-day operation. Covers effective use of techniques, creative thinking, innovative practices through the use of projects, problem presentations and experiences directly related to the subject matter.

**HEALTH AIDE**

The Health Aide Program (one semester in length) prepares the student to receive a Certificate of Completion from the college in one of five different specialty areas and to be employed as an Aide in an agency according to the specialty area.

- Hospital Nursing Assistant:**  
For employment in a general acute care hospital, a convalescent hospital or a rest home.

2. **Home Health Aide:**  
For employment in a clinic, hospital or health department which has a home-health program.
3. **Mental Health Aide:**  
For employment in a psychiatric hospital, day treatment center, crisis team, drug or alcohol detoxification center.
4. **Developmental Disability/Mental Retardation Aide:**  
For employment at a work training center, activity center, as a teacher's aide for Special Education classes, as a house parent at a community living center or group home, for respite care in client's homes within the community.

Students are admitted each semester. An admissions committee will review all applications. Early application (through the college counseling center) is recommended, since the number of students who can be admitted is limited. Not all specialty areas will be taught each semester. Applicants should check with the Counseling Division before making application. Admission requirements include a health examination, writing of the college placement tests and orientation conference with a member of the Health Aide facility. Applicants with prior education in nursing (ADN, LVN or Health Aide) may apply for credit by examination and/or advanced placement. This will be determined on an individual basis. A grade of C or better in each of the Program courses is required for successful completion of the Health Aide Program. An overall 2.0 grade is required in order to receive a Certificate of Completion. Transportation to the area health agencies is the responsibility of the student.

**HA 15A (9)  
HOSPITAL NURSING ASSISTANT  
3 Hrs. Lec. 18 Hrs. Lab.**

Prerequisites: Enrollment in the Health Aide Program. A course for those intending to work as aides in a variety of health agencies - acute hospital, convalescent hospital, community health, mental health, developmentally disabled/mental retardation. Seven (7) weeks will be taught as a "core course" for all enrolled. Topics will include the role and functions of the health aide, legal and ethical responsibilities, communication skills, community resources for health care. Basic knowledge of nutrition, personal hygiene, safety, comfort and rest, growth and development will be studied. College laboratory periods will allow for practice in the procedural skills needed in these areas. Nine (9) weeks will consist of supervised laboratory experiences in various health

agencies according to the student's area of chosen specialty. Weekly lecture-discussion classes will continue within the specialty areas. The final two (2) weeks will consist of "sharing" and review classes at the college for all enrolled. Students who complete the course will receive a standard Red Cross First Aid Certificate and will be certified in cardio pulmonary resuscitation (CPR).

Hospital Nursing Assistant specialty area of the Health Aide course (9 weeks): Students will receive clinical laboratory experiences at Valley Convalescent Hospital, Callexico Hospital, Pioneers Memorial Hospital, El Centro Community Hospital (approximately 2 weeks each facility). Weekly lectures will continue within the specialty area. A student completing the Hospital Nursing Assistant portion will receive certification from the State of California as a Nurse Assistant.

**HA 15B (9)  
COMMUNITY HEALTH AIDE  
3 Hrs. Lec. 18 Hrs. Lab.**

For general overview of course, see HA 15A, paragraph 1.

Community Health Aide specialty area of the Health Aide course (9 weeks): Students will receive clinical laboratory experiences in community health at local home health agencies. Weekly lectures will continue in the specialty area. Students will receive certification by the State of California as a Home Health Aide.

**HA 15C (9)  
DEVELOPMENTAL DISABILITY/  
MENTAL RETARDATION AIDE  
3 Hrs. Lec. 18 Hrs. Lab.**

For general overview of course, see HA 15A, paragraph 1.

Developmental Disability/Mental Retardation Aide specialty area of the Health Aide course (9 weeks): For those students planning to work in a variety of health agencies serving persons who are developmentally disabled and/or mentally retarded. Topics will include the definitions of developmental disabilities, diagnosis, causation, genetics, and team approach. Case management, family counseling, role of allied disciplines, and resources available will be discussed as they relate to the developmentally disabled and/or mentally retarded infant, pre-school child, elementary school age group, junior high and high school ages, and the adult. Each age grouping will be additionally reviewed according to the degree of the handicapping condition(s) from profound, severe, moderate to mild. Final sessions will review the role of the developmentally disabled/mentally retarded person, and the role of the health aide.

Students will receive supervised laboratory experiences at Valley Center for Exception (2 weeks), Activity Center (2 weeks), the Community Living and Recreation Center (2 weeks). One week voted to field trips to other areas.

**HA 15D (9)  
MENTAL HEALTH AIDE  
3 Hrs. Lec. 18 Hrs. Lab.**

For general overview of course, see HA 15A, paragraph 1.

Mental Health Aide specialty area of the Health Aide course (9 weeks) will receive supervised clinical laboratory experience at the Imperial Mental Health Services - In-Patient Hospital, Day Hospital, Mobile Imperial Manor. Weekly lectures will continue within the specialty area.

**Nursing - Continuing Education  
Health Aide**

Prospective students are advised to check with the college previous semester concerning continuation courses to be offered. New courses are offered periodically as community health agency and health care needs are identified. A matriculation special services fee will be charged.

**HA 38 (1/2-3)  
THIS YEAR'S ISSUES IN HEALTH AID  
1/2-3 Hrs. Lec.  
(Same as RN 38, VN 38)**

**HA 40 (2)  
INTRAVENOUS THERAPY  
TECHNIQUE  
1.8 Hrs. Lec. .3 Hr. Lab.  
Prerequisite: HA 15 or equivalent  
permission of instructor. (Same as HA 40, VN 40)**

**HEALTH EDUCATION**

**HE 1 (3)  
HEALTH EDUCATION  
3 Hrs. Lec.**

Fundamentals of healthful living designed to provide scientific health information, and promote desirable health habits and practices. Includes the stress and the relationship of alcohol, tobacco, and smoking to health factors involved in family and community health and safety.

**HE 2 (3)  
FIRST AID  
3 Hrs. Lec.**  
The immediate and temporary care given in case of accident, illness or injury. Includes agency childbirth. Course shall be required for all students for the Standard or Red Cross First Aid Certificate.

**HE 3 (3)  
HEALTH EDUCATION - MILITARY SERVICE**

Prerequisite: The satisfactory completion of one year or more in the military service of the United States. The student wishing credit for military service must present his/her DD214 or equivalent supporting document to the Admissions Office and register for the credit. If the student signs up for the class for military credit and does not submit verification of service, he/she will be dropped as a No-Show and will not receive credit. HE 3 does not count for units toward V.A. or full-time student. These are not contact hours. May be taken only once.

**HEALTH TECHNOLOGIES**

**HT 1 (2)  
INTRODUCTION TO HEALTH SCIENCE**  
2 Hrs. Lec.

In this course the educational requirements and practice demands of the varied careers within the health services are surveyed. Progress and trends in health care delivery since 1940 are presented as a background for the exploration of the current state of the art. Major health problems of the 1980's are identified and the impact of lifestyle, total environment and education on physical and emotional well-being are analyzed. Terminology unique to the health sciences professions and the metric system of weight and measurement are studied.

**HEAVY MACHINERY**

**HM 35 (5)  
HEAVY EQUIPMENT OPERATION AND MAINTENANCE**  
3 Hrs. Lec. 6 Hrs. Lab.

The selection, operation, maintenance, and minor repair and adjustment of heavy equipment including hydraulic and pneumatic operations and safety, including dozer, backhoe, graders, skip loaders, cranes, etc. (Same as Ag 28)

**HM 36 (5)  
POWER TRANSMISSION SYSTEMS**  
3 Hrs. Lec. 6 Hrs. Lab.

Prerequisites: Either Hm 35, Ag 33A, AT 51, or permission of instructor. The study and repair of power transmitting devices, such as standard transmissions, clutches, hydraulics, differentials, brakes, drive train and tracks.

**HM 40 (5)  
DIESEL ENGINE REPAIR**  
3 Hrs. Lec. 6 Hrs. Lab.

Prerequisite: Ag 33A or Auto Tech 51 or permission of the instructor. The study of diesel engine theory, design, construction and repair of heavy machinery power units. (Same as Ag 39)

**HISTORY**

**HIST 4A (3)  
HISTORY OF WESTERN CIVILIZATION**  
3 Hrs. Lec.

A survey of the major developments in the Western heritage from the world of the ancient Greeks to sixteenth century Europe. Emphasis is on the foundation of Western culture, religion, politics and society.

**HIST 4B (3)  
HISTORY OF WESTERN CIVILIZATION**  
3 Hrs. Lec.

A study of Western civilization from the sixteenth century to the present in which political, economic, social and intellectual changes and developments are stressed. May be taken before Hist 4A.

**HIST 8A (3)  
HISTORY OF THE AMERICAS**  
3 Hrs. Lec.

A survey course in which the history of the United States, Canada and Latin America are considered as an integrated whole. Native American Indian cultures and colonial development through the era of independence are discussed. This course together with Hist 8B will satisfy graduation requirements in American Institutions.

**HIST 8B (3)  
HISTORY OF THE AMERICAS**  
3 Hrs. Lec.

A survey course in which the history of the United States, Canada and Latin America are considered as an integrated whole. The area of study covers nineteenth and twentieth century development of the Americas. Consideration is given to the Constitution of the United States. This course together with Hist 8A will satisfy graduation requirements in American Institutions.

**HIST 10 (3)  
HISTORY OF MODERN RUSSIA**  
3 Hrs. Lec.

A history of modern Russia from about 1900 to the present day, showing the historical background of Russian Marxism, special attention to the Russian revolution of 1917, the consolidation of the Stalinist dictatorship, foreign and domestic policies of the Soviet Union since the Revolution, and a discussion of the expansion of Russian communism and the challenge of Russia today.

**HIST 17A (3)  
UNITED STATES HISTORY**  
3 Hrs. Lec.

A survey of the political and social development of the United States from the seventeenth century to 1865. This

course and either Hist 17B or Poly Sci 1 will meet graduation requirements in American Institutions.

**HIST 17B (3)  
UNITED STATES HISTORY**  
3 Hrs. Lec.

A survey of the political and social maturation of the United States from the end of the Civil War to the present. This course and either Hist 17A or Poly Sci 2 will meet graduation requirements in American Institutions. May be taken before Hist 17A.

**HIST 30 (3)  
MEXICO AND THE AMERICAN SOUTHWEST**  
3 Hrs. Lec.

A one-semester survey of Mexico from the early nineteenth century, the independence movement, the Mexican American War and the development of Mexico and the American Southwest in the last century.

**HIST 40 (3)  
CIVILIZATION OF SPAIN AND PORTUGAL**  
3 Hrs. Lec.  
(Same as Span 40)

**HIST 41 (3)  
CIVILIZATION OF SPANISH AMERICA AND BRAZIL**  
3 Hrs. Lec.  
(Same as Span 41)

**HONORS**

**HONORS 21 (1-2)  
HUMANITIES DIVISION HONORS PROGRAM**  
1-2 Hrs. Lec.

**HONORS 22 (1-2)  
BUSINESS DIVISION HONORS PROGRAM**  
1-2 Hrs. Lec.

**HONORS 23 (1-2)  
SOCIAL SCIENCE DIVISION HONORS PROGRAM**  
1-2 Hrs. Lec.

**HONORS 24 (1-2)  
BEHAVIORAL SCIENCE DIVISION HONORS PROGRAM**  
1-2 Hrs. Lec.

**HONORS 25 (1-2)  
AUTOMOTIVE-AGRICULTURE TECHNOLOGY DIVISION HONORS PROGRAM**  
1-2 Hrs. Lec.

**HONORS 26 (1-2)  
ENGLISH DIVISION HONORS PROGRAM**  
1-2 Hrs. Lec.

**HONORS 27 (1-2)**  
**SCIENCE DIVISION HONORS PROGRAM**  
 1-2 Hrs. Lec.

**HONORS 28 (1-2)**  
**MATHEMATICS-ENGINEERING DIVISION HONORS PROGRAM**  
 1-2 Hrs. Lec.

**HONORS 29 (1-2)**  
**HEALTH, PHYSICAL EDUCATION AND RECREATION DIVISION HONORS PROGRAM**  
 1-2 Hrs. Lec.

**HONORS 21-29**  
**COURSE DESCRIPTION**  
 Prerequisites: Sophomore standing and admission to the program. Individual study with special guidance of instructor. Recommended for honor students in a major area offered by the division or for students requesting study in depth in a particular area. By request of students and/or suggestion of instructor and approval of division chairperson. Interdisciplinary conference, with readings, discussion, reports.

**HONORS 30AB (1-6)**  
**FIELD STUDY**  
**Lec./Lab. by arrangement**  
 Regular class instruction for honors students in major area of study offered by a division. Interdisciplinary conference with readings, discussion, and reports. Travel to on-site study areas may be required at the student's expense. Special curriculum may be requested by the students and/or instructors, but must be approved by the appropriate division chairperson and the Vice President for Academic Services.

**HONORS 31 (1-7)**  
**NURSING DIVISION HONORS PROGRAM**  
**Lec./Lab. by arrangement**  
 Prerequisites: Admission to ADN, VN or HA Program and permission of Program Director. Intended for transfer students or students who will take only a portion of one of the Registered Nursing, Vocational Nursing or Health Aide courses.

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### HUMANITIES

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**HUM 1A (3)**  
**MAN AND THE ARTS**  
 3 Hrs. Lec.  
 Prerequisite: Hum 25 or eligibility for Eng 1A. A course in the unified humanities in which man is the center: "his problems, his wonderings, his confusion of experience, his experience with beauty." The course covers Greek, Roman and Medieval periods reflected in the arts. Conducted by lectures, films, field trips and discussions.

**HUM 1B (3)**  
**MAN AND THE ARTS**  
 3 Hrs. Lec.  
 Prerequisite: Hum 25 or eligibility for Eng 1A. A course in the unified humanities in which man is the center: "his problems, his wonderings, his confusion of experience, his experience with beauty." The course covers the period of the Renaissance through the 20th Century. Conducted by lectures, films, field trips and discussions.

**HUM 25 (3)**  
**THE HUMANITIES**  
 3 Hrs. Lec.  
 An exploratory course introducing the student to the major disciplines in the humanities: art, architecture, literature, music, and the theatre. Examination of humanistic values as they are reflected through the arts of world cultures. Includes guest lecturers, field excursions, films, and discussions.

**HUM 26 (3)**  
**THE HUMANITIES**  
 3 Hrs. Lec.  
 Prerequisites: Hum 25 with a grade of B or better or eligibility for Eng 1A. An advanced course dealing extensively in music, drama, visual arts and architecture. Humanistic and interdisciplinary approach to study man's reflection of himself in creative expression. Research paper or creative project required. Conducted by lecture, discussion, field trips, films, and guest lecturers.

**HUM 40 (3)**  
**INTRODUCTION TO FRENCH CIVILIZATION AND CULTURE**  
 3 Hrs. Lec.  
 (Same as Fr 40)

**HUM 41 (3)**  
**INTRODUCTION TO FRENCH CIVILIZATION AND CULTURE BEYOND FRANCE**  
 3 Hrs. Lec.  
 (Same as Fr 41)

**HUM 54 (3)**  
**INTRODUCTION TO FILM HISTORY AND CRITICISM**  
 2 Hrs. Lec. 2 Hrs. Lab.  
 (Same as Eng 3, MPP 3)

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### HUMAN RELATIONS

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The Human Relations curriculum with an Associate of Arts degree has been designed to prepare students for employment as counselor aides and group counselor aides, vocational rehabilitation aides, teacher aides, eligibility workers, social service technicians and other pre-professional positions in the

vocational "new careers" or people-to-people services. Techniques are used by youth and recreational institutions, welfare and national rehabilitation agencies, hospitals, state employment educational institutions and centers.

**HR 8 (3)**  
**PERSONAL AND CAREER DEVELOPMENT**  
 3 Hrs. Lec.  
 This course examines the procedure that would follow in making a career decision. Students plan to enter professions involving help relationships such as education, work, counseling, psychology, community work, and related areas, attention to students who are uncertain about their own future would be provided. Self-awareness will be praised by testing and discussing interests, aptitudes, abilities, limitations and life goals. Career awareness will be facilitated by exploring the nature of work in terms of occupational look, wages, training required, opportunities for advancement and life. Material testing fee payable during week of instruction. (Same as P

**HR 9 (3)**  
**INTERVIEWING AND COUNSELING**  
 3 Hrs. Lec.  
 A study of the theory, process and practice of interviewing and counseling in the community service situation. This course is designed to assist the student in gaining knowledge for the development of skills to deal with the interview in all kinds of situations. Theoretical counseling and basic helping skills will be presented, demonstrated and practiced. (Same as Psych 9)

**HR 10 (3)**  
**SMALL GROUP LEADERSHIP**  
 3 Hrs. Lec.  
 Gaining of knowledge and skills in group leadership leading to effectiveness in interpersonal relationships and increased understanding of small group behavior, with emphasis on facilitating effective communication. (Same as Psych 10)

**HR 11AB (3-3)**  
**PRACTICUM**  
 1 Hr. Lec. 6 Hrs. Lab. field experience per week  
 Prerequisites: HR 9, Psych 1A, Sociology or concurrent enrollment. A course designed to provide opportunity for the student in Human Relations to gain experiences under supervised conditions such as those involving



health, child development, youth correction, welfare, homes for the neglected, homes for the aged and educational settings. Students will be supervised by credentialed instructional staff and professionally trained personnel. HR/Psych 11B offers an opportunity for the student either to continue with the HR/Psych 11A experience or to elect an assignment at another agency or location. HR/Psych 11A shall not be taken concurrently with HR/Psych 11B. (Same as Psych 11AB) This course will be offered on a credit (Cr) basis only.

**HR 61 (1)  
COLLEGE STUDY TECHNIQUES  
2 Hrs. Lab.**

A course in the methods of efficient study which is designed to assist the student in adjusting to the demands of college study and the improvement of learning skills. Includes a survey of the learning processes and the development of the techniques of listening, the use of texts, taking useful notes, outlining, scheduling, learning to concentrate and remember, the preparation for examinations, the use of the library, the management techniques and interpersonal communication skills.

**HR 62ABCD (1-1-1-1)  
PERSONAL AND SOCIAL  
DEVELOPMENT  
1 Hr. Lec.**

A course utilizing group dynamics, designed to encourage and develop insight into collegiate and modern problems of adjustment, the utilization of personal potential, and the understanding of individual and group processes of development.

**HR 65ABCD (1-1-1-1)  
THE STUDENT IN CONTEMPORARY  
COLLEGE AFFAIRS  
1 Hr. Lec.**

Designed to develop leadership qualities in students desiring to better understand the principles of publicity, finance, organization procedures, group dynamics and human relations. The course shall be offered on a credit basis only.

**INDIVIDUAL STUDIES**

**IND STU 40 or 80 (1-3)  
VOCATIONAL EDUCATION  
Hours by Arrangement**

**IND STU 41 or 81 (1-3)  
HUMANITIES  
Hours by Arrangement**

**IND STU 42 or 82 (1-3)  
ENGLISH  
Hours by Arrangement**

**IND STU 43 or 83 (1-3)  
NATURAL SCIENCE  
Hours by Arrangement**

**IND STU 44 or 84 (1-3)  
SOCIAL SCIENCE  
Hours by Arrangement**

**IND STU 45 or 85 (1-3)  
BUSINESS  
Hours by Arrangement**

**IND STU 46 or 86 (1-3)  
HEALTH, PHYSICAL EDUCATION  
AND RECREATION  
Hours by Arrangement**

**IND STU 47 or 87 (1-3)  
BEHAVIORAL SCIENCE  
Hours by Arrangement**

**IND STU 40-47 and 80-87  
COURSE DESCRIPTION**  
Available to students on an individual basis. Course content, prerequisites and unit credit to be determined by the Division and the Vice President for Academic Services. Courses developed in relation to student interest and staff availability. Courses numbered 80-87 are non-transferable.

**IND STU 48AB or 88AB (1-6)  
PHYSICALLY LIMITED PROGRAM  
1-6 Hrs. Lec.-Lab. by arrangement**  
This course is designed to help prepare the physically-limited student for full or adaptive participation in community college activities: academic, social, vocational and environmental. Course number 88 is non-transferable.

**IND STU 49ABCD (1/2-1 1/2-1 1/2-1 1/2-1)  
INDIVIDUAL STUDIES/NURSING  
LEARNING CENTER  
1-2 Hrs. Lab. by arrangement**  
Prerequisite: Enrollment in a Nursing Education and Health Technologies Division Program. An individualized course of independent study by students in the programs offered by the Nursing Education and Health Technologies Division. Students will use materials in the Nursing Learning Center, and will have the assistance of the NLC instructor/tutors as needed. Eighteen (18) hours of independent study in the NLC per semester will earn 1/2 unit credit. Thirty-six (36) hours of independent study in the NLC per semester will earn 1 unit of credit.

**IND STU 89ABCD (1-1-1-1)  
INDIVIDUAL STUDIES FOR THE  
LEARNING CENTER  
2 Hrs. Lab.**  
An individualized course of study in any discipline using materials in the Learning Center. Non-transferable.

**ITALIAN**

**ITAL 1A (2)  
ELEMENTARY ITALIAN  
2 Hrs. Lec. 1/2 Hr. Lab.**  
This course is designed to develop in the student rudimentary abilities in the four basic language skills: hearing, speaking, reading and writing with emphasis on contemporary usage and grammatical emphasis on the present tense. The sequence of Ital 1A and 1B is equivalent to a regular 4-unit 1-semester college level Italian course.

**ITAL 1B (2)  
ELEMENTARY ITALIAN  
2 Hrs. Lec. 1/2 Hr. Lab.**  
Prerequisite: Ital 1A. A continuation of Ital 1A. Grammatical emphasis on the future and present perfect tense and the imperative mode. The sequence of Ital 1A and 1B is equivalent to a regular 4-unit 1-semester college level Italian course.

**JOURNALISM**

**JRN 1 (3)  
INTRODUCTION TO JOURNALISM  
3 Hrs. Lec.**  
Prerequisite: Eligibility for Eng 2B or Eng 1A. The course focuses on the newspaper as a vehicle for communication within a community. Students study basic components of print journalism including types of articles, writing style, interview techniques, makeup, and ethics.

**JRN 2ABC (4-4-4)  
NEWSPAPER PRODUCTION  
3 Hrs. Lec. 2 Hrs. Lab.**  
Prerequisite: Jrn 1 or equivalent. Course provides a concrete introduction to principles and techniques of newspaper production through work on the student newspaper. Students assume specific staff positions with corresponding responsibilities for the paper's production. Lab work includes editing of stories, planning pages, headline writing, proofreading, and pasteup.

**JRN 3 (3)  
MASS COMMUNICATIONS  
3 Hrs. Lec.**  
Survey of mass media; their interrelationships, their problems and responsibilities. Relationship of the mass media to the individual.

**JRN 5 (3)  
INTRODUCTION TO PHOTOGRAPHY  
2 Hrs. Lec. 3 Hrs. Lab.  
(Same as Ph 5)**

**JRN 8 (3)  
PUBLIC RELATIONS TECHNIQUES  
3 Hrs. Lec.**

A study and analysis of projecting a public image by a business, public institution, governmental bureau. Planning of public relations campaigns for individual personalities, and for institutions and organizations, i.e., philanthropic, health, political, civic, commercial. Use of communications media (radio, television, newspapers, technical publications, inplant publications) to help student planning. Writing of press releases. Planning of press conferences. Preparing a press kit. Publicizing events. (Same as Bus 79)

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**LAW ENFORCEMENT**

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**LAW ENF 21 (3)  
INTRODUCTION TO THE  
ADMINISTRATION OF JUSTICE  
3 Hrs. Lec.**

The history and philosophy of administration of justice in America; recapitulation of the system; identifying the various sub-systems; role expectations, and their interrelationships; theories of crime, punishment and rehabilitation; ethics, education and training for professionalism in the system.

**LAW ENF 22 (3)  
POLICE PATROL PROCEDURES  
3 Hrs. Lec.**

Techniques of patrol and observation; handling complaints and called-for services; public relations; techniques of field interrogation; officer's notebook procedures; essentials of police report writing; utilization of specialized equipment.

**LAW ENF 23 (1)  
DEFENSIVE TACTICS  
2 Hrs. Lab.**

A study of the art of self-defense through boxing, wrestling and fencing. Includes the art of weight lifting, control of crowds, mechanics of arrest, and the transportation of prisoners and mentally ill persons. Satisfies the district physical education activity requirement for one semester. (Same as PE 44)

**LAW ENF 24 (3)  
TRAFFIC CONTROL AND VEHICLE  
CODE  
3 Hrs. Lec.**

The study of traffic control and vehicle code problems.

**LAW ENF 26 (3)  
TRAFFIC ACCIDENT INVESTIGATION  
3 Hrs. Lec.**

The study and procedures of traffic accident investigation.

**LAW ENF 28 (3)  
WILDLIFE LAW ENFORCEMENT  
3 Hrs. Lec.**

The objective of this course is to acquire the knowledge and skill necessary for understanding the importance of Wildlife Law Enforcement in perpetuating and managing our fish and wildlife resources.

**LAW ENF 29 (3)  
PRELIMINARY INVESTIGATION AND  
REPORTING  
3 Hrs. Lec.**

The organization and preparation of written communications and reports. Emphasis on practical aspects of report preparation required by law enforcement officers in the course of their duties including reporting on mock crime scenes.

**LAW ENF 33 (3)  
CONCEPTS OF CRIMINAL LAW  
3 Hrs. Lec.**

Historical development of law and constitutional provisions; definitions; classifications of crime, and their application to the system of administration of justice; legal research, study of case law, methodology, and concepts of law as a social force.

**LAW ENF 34 (3)  
CRIMINAL INVESTIGATION  
3 Hrs. Lec.**

Fundamentals of investigation; techniques of crime scene recording and search; collection and preservation of physical evidence; modus operandi processes; sources of information; interview and interrogation; follow-up and case preparation.

**LAW ENF 35 (3)  
LEGAL ASPECTS OF EVIDENCE  
3 Hrs. Lec.**

Prerequisites: LE 21. Origin, development, philosophy and constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search and seizure; kinds and degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies.

**LAW ENF 36 (3)  
PRINCIPLES AND PROCEDURES  
OF THE JUSTICE SYSTEM  
3 Hrs. Lec.**

An in-depth study of the role and responsibilities of each segment within the administration of the justice system: law enforcement; judicial; corrections. A past, present and future exposure to each sub-system procedure, from initial entry to final disposition, and the relationship each segment maintains with its system member.

**LAW ENF 37 (3)  
JUVENILE CONTROL  
3 Hrs. Lec.**

Techniques of handling juveniles and victims, prevention and control of delinquency, diagnosis, referral, organization of community resources, juvenile law and juvenile procedure.

**LAW ENF 38 (3)  
COMMUNITY RELATIONS  
3 Hrs. Lec.**

An in-depth exploration of the administration of justice programs and their agencies. Through participation and study the student will be aware of the inter-relationships and expectations among the various agencies and the public. Principal emphasis will be placed upon the professional image of the system of justice administration and the development of relationships between members of the system and the public.

**LAW ENF 39 (3)  
ARREST AND FIREARMS  
3 Hrs. Lec.**

Designed to satisfy the current standards of the Commission on Officer Standards and Training required by Penal Code Section 13300. Includes laws of peace officers; includes laws of search and seizure, methods of discretionary decision making where applicable, use of and carry of firearms; mandatory for all peace officers who do not possess a basic certificate awarded by the Commission on Peace Officer Standards and Training. Lab fee will be charged.

**LAW ENF 40 (1)  
ADVANCED OFFICERS COURSE  
1 Hr. Lec.**

Prerequisites: Permission of instructor. This course is designed to keep officers informed of new laws, new commissions, changes in law enforcement policy, new concepts of police technology, advanced techniques, police-community relations, law enforcement ethics, maintaining police integrity and other refresher training as may be necessary.

**LAW ENF 41 (3)  
MASS SOCIOLOGY AND  
COLLECTIVE BEHAVIOR  
3 Hrs. Lec.**  
(Same as Sociol 41)

**LAW ENF 42 (1/2)  
NONLETHAL CHEMICAL AGENTS  
1/2 Hr. Lec.**

Prerequisite: Permission of the instructor. Introduction to nonlethal chemical agents - their use and purpose. Required by Chemical Agents Act of 1969. 1 hour lecture required for completion of this course.

**LAW ENF 43 (3)  
RESERVE OFFICERS CLASS LEVEL II  
3 Hrs. Lec.**

Prerequisite: Level III or permission of instructor. A basic overview course in condensed version designed to prepare a student to be accepted by a law enforcement agency as a Level II reserve officer. Open to all students who are qualified as potential employees or reserves.

**LAW ENF 44 (6)  
RESERVE OFFICERS CLASS LEVEL I  
6 Hrs. Lec.**

Prerequisite: Level II or permission of instructor. A basic overview course in condensed version designed to meet the POST classroom training requirements for Level I reserves. Twelve (12) additional lab hours to be arranged per semester.

**LAW ENF 46 (3)  
THE MENTALLY ILL, ALCOHOLIC,  
DRUG ADDICT AND THE LAW  
3 Hrs. Lec.**

(Same as Psych 46)

**LAW ENF 47 (1)  
FIELD TRAINING OFFICERS  
1.33 Hrs. Lec.**

Prerequisite: Student to be a Peace Officer or a Level I Reserve Officer. To teach the training officer the proper methods of instructing new recruits in the correct manner of performing their assigned tasks.

**LAW ENF 48 (3)  
ADVANCED CRIMINAL LAW  
3 Hrs. Lec.**

Prerequisite: Law Enf 33. An in-depth study of the substantive laws commonly encountered by the municipal, county, or state police officer. The scope of the course includes misdemeanor and felony violations of the criminal statutes.

**LAW ENF 49 (6)  
PRE-ACADEMY TRAINING  
6 Hrs. Lec.**

Prerequisite: Permission of the instructors. The history and philosophy of the administration of justice in California; identifying the various sub-systems, role expectations, ethics, education, and training of persons seeking employment in the criminal justice system. Specific instruction will be stressed in pertinent law enforcement areas to assist the student passing a P.O.S.T. Academy.

**LAW ENF 58 (1-12)  
BASIC PROBATION OFFICERS'  
ACADEMY  
1-13.3 Hrs. Lec.**

Prerequisite: Admission by permission of the instructor. This course is designed to improve the skills of the probation officer by an in-depth study of the role

and responsibility of the probation officer. Included is a past, present and future exposure to probation procedures from initial entry to final disposition.

**LEGAL ASSISTANT**

**LA 21 (3)  
RESEARCH AND CRIMINAL LAW  
3 Hrs. Lec.**

An introductory course regarding the use of the legal library, research techniques and drafting legal documents. Includes the Penal Code and other criminal statutes and provides an understanding of the elements of crimes and defenses.

**LA 22 (3)  
CIVIL PROCEDURES & FAMILY LAW  
3 Hrs. Lec.**

Prerequisite: LA 21 or concurrent enrollment. An introductory course in basic civil procedures, court systems, and procedures as they apply to federal, state and civil laws. Includes topics in family law relative to marriage, community property, dissolution, parent-child relations and adoption.

**LA 23 (3)  
CIVIL DISCOVERY AND TORTS  
3 Hrs. Lec.**

Prerequisite: LA 21 or concurrent enrollment. A study of the fundamental principles of the law of torts and examination of the techniques of investigation involved in the lawyer's handling of tort claims, including various forms of pleadings. An examination of the rules of civil evidence and the admissibility of evidence, depositions, interrogations, admissions, notices to produce, and related rules of discovery and evidence.

**LA 24 (3)  
CORPORATIONS AND BANKRUPTCY  
3 Hrs. Lec.**

Prerequisite: LA 21 or concurrent enrollment. This course covers the principles of agency, principal and third parties, formation and management of California corporations, the rights and liabilities of stockholders, and corporate reorganization and dissolution. It includes regulations of state and federal governments relating to income, deductions, exemptions, depreciation and capital gains and losses. It also includes a study of the bankruptcy laws and procedures with topics on creditors' rights, debtors' exemptions, and secured transactions.

**LA 25 (3)  
REAL ESTATE LAW FOR LEGAL  
ASSISTANTS  
3 Hrs. Lec.**

Prerequisite: LA 21 or concurrent enrollment. The study of the legal background in property ownership, with special

reference to the law of California as it applies to community property, conveyances, deeds, trust deeds, mortgages, homesteads and estates, etc.

**LA 26 (3)  
WILLS — TRUSTS — PROBATE  
3 Hrs. Lec.**

Prerequisite: LA 21 or concurrent enrollment. A study of the fundamental principles of the law of wills and trusts including simple will and trust forms. An examination of the organization and jurisdiction of a California Probate Court including gift, inheritance and estate taxes, and practice in documentation.

**LIBRARY TECHNICIAN**

**LT 51 (3)  
INTRODUCTION TO LIBRARY  
SERVICES  
3 Hrs. Lec.**

This course is an introduction to libraries and their organization. It is designed for students interested in employment in school, public, or college libraries as library technicians. Basic philosophy, procedures, tools, and techniques for library routines are emphasized.

**LT 52 (3)  
SUPPORT FOR TECHNICAL  
SERVICES  
3 Hrs. Lec.**

Prerequisites: LT 51 or consent of the instructor. An introduction to the various semi-professional tasks in the technical processes phase of library operation.

**LT 53 (3)  
SUPPORT FOR PUBLIC SERVICES  
3 Hrs. Lec.**

Prerequisites: LT 51 or consent of the instructor. Library public relations, circulation control systems and location of information through use of card catalogs, indexes, and basic reference books.

**LT 54 (3)  
INTRODUCTION TO AUDIOVISUAL  
SERVICES  
3 Hrs. Lec.**

Prerequisites: LT 51 or consent of the instructor. A survey course of the processes necessary for the utilization of audiovisual materials and equipment in the library situation.

**LT 55 (3)  
CATALOGING AND CLASSIFYING  
3 Hrs. Lec.**

Prerequisites: LT 51 and/or LT 52 or consent of the instructor. A course devoted to the development of the skills and practical experiences needed by library technical assistants in support of the technical services aspect of a library

operation. The student learns the theory and philosophy underlying the classification systems used in American libraries, classifies and catalogs book and non-book materials, and is exposed to a variety of work-experience situations where this knowledge is put to use.

## MATHEMATICS

Whenever a mathematics class of any kind is a prerequisite, that mathematics class must be passed with a C or better grade.

### **MATH X (3) BEGINNING ALGEBRA 3 Hrs. Lec.**

Prerequisite: Completion of Math 51 or satisfactory score on mathematics placement test. A one-semester course which covers the material generally included in a full year high school algebra course.

### **MATH Y (3) PLANE GEOMETRY 3 Hrs. Lec.**

Prerequisite: Completion of Math 51 or satisfactory score on mathematics placement test. Covers the same material included in the full year of plane geometry in high school.

### **MATH A (3) INTERMEDIATE ALGEBRA 3 Hrs. Lec.**

Prerequisites: Math X and Y. This one-semester course takes the place of a strong second-year algebra course studied for the full year in high school. Included will be a development of real number systems, radicals and exponents, quadratic equations, binomial expansion, arithmetics and geometric progressions, logarithms, conics and the introduction to determinants.

### **MATH C (3) PLANE TRIGONOMETRY 3 Hrs. Lec.**

Prerequisite: Math A or its equivalent. Special emphasis is placed on trigonometric analysis, applications, solving trigonometric equations including some with inverse functions, and graphing. Open to all students who have credit for high school trigonometry as well as for those who have not.

**SPECIAL NOTE:** Mathematics courses 51, X, Y, A and C are treated by some universities and state colleges as high school subjects. It is the responsibility of the student to check the catalog of that institution to which he expects to transfer to identify deficiencies which must be removed or to plan the sequence of courses which must be completed.

### **MATH 2 (5) ADVANCED ALGEBRA AND TRIGONOMETRY 5 Hrs. Lec.**

Prerequisite: Math A or equivalent. This is a course intended for students who need a thorough foundation before attempting calculus. Included will be the study of the real number system; functions with special emphasis on exponential, logarithmic and trigonometric functions; the complex numbers; theory of equations; systems of equations; permutations, combinations, the binomial theorem, probability.

### **MATH 3A (5) ANALYTIC GEOMETRY AND CALCULUS 5 Hrs. Lec.**

Prerequisite: Math 2 or equivalent. Concepts dealing with limits, continuity, differentiation and applications, integration and applications, exponential and logarithmic functions and other transcendental functions.

### **MATH 3B (5) ANALYTIC GEOMETRY AND CALCULUS 5 Hrs. Lec.**

Prerequisite: Math 3A. Concepts dealing with methods of integration, plane analytic geometry, polar coordinates, vectors and parametric equations and infinite series.

### **MATH 4 (4) CALCULUS AND DIFFERENTIAL EQUATIONS 5 Hrs. Lec.**

Prerequisite: Math 3B. Concepts dealing with partial differentiation, multiple integration, vector analysis and differential equations.

### **MATH 10 (3) MATHEMATICS FOR ELEMENTARY SCHOOL TEACHERS 3 Hrs. Lec.**

Prerequisites: Math X and Math Y, or the equivalent, or permission of instructor. Recommended for students who are working towards a teaching credential in elementary education. Sets and relations, functions, the development of the number system from the natural numbers, including the whole numbers, the integers, the rational numbers, and the real numbers.

### **MATH 12 (3) ELEMENTARY STATISTICS 3 Hrs. Lec.**

Prerequisite: Math A or the equivalent. Graphical representation of statistical data, calculations and uses of various averages, measures of variability, elementary probability and the normal curve, sampling and estimation. (Same as Bus 26/Psych 12)

### **MATH 17 (3) MATHEMATICS FOR BUSINESS ANALYSIS 3 Hrs. Lec.**

Prerequisites: Math A or the equivalent. To prepare for upper division college business. To provide some understanding of ideas from modern mathematics which are so important in this age. Topics included are logic, accounting, probability, vectors and matrices, mathematics of finance, programming, and calculus with applications. (Same as Bus 9)

### **MATH 18 (3) INTRODUCTION TO MATHEMATICS 3 Hrs. Lec.**

Prerequisites: Math X and Y or equivalent. Topics from logic, modern algebra and analysis designed to give the student an introduction to the structure of mathematical theories and their applications. Includes course work in the structure of arithmetic and algebra of the real number system. Intended for mathematics majors.

### **MATH 47 (3) PROGRAMMING IN FORTRAN 3 Hrs. Lec.**

(Same as Bus 55)

### **MATH 50 (3) SHOP MATHEMATICS 3 Hrs. Lec.**

A basic course in mathematics designed to meet the needs of students enrolled in the following vocational programs: automotive technology, welding, cultural engineering, and physical science. The course will cover a mathematics for the shop student including, fractions, measuring devices, basic geometry, measurement of area and volumes, board measure, and measurement. Satisfies the Imperial Valley College mathematics competency requirement as demonstrated on appropriate examination and is not open to students who have completed Math 51. (Same as Ag 50, Auto Tech 50, and Weld 50)

### **MATH 51 (3) BASIC MATHEMATICS 3 Hrs. Lec.**

Brief review of arithmetic including fractions, decimals, per cent, square roots and an introduction to algebra. This course is not open to students who have satisfactory scores on mathematics placement tests.

### **MATH 57 (3) PROGRAMMING IN BASIC 3 Hrs. Lec.**

(Same as Bus 57)

**MATH 60 (1)**  
**MATH LAB**  
 2 Hrs. Lab.

Prerequisite: Concurrent enrollment in Math/Ag/Auto Tech/PL/Weld 50, Math 51 or Math X. Designed for the student needing additional help and/or personal instruction.

**MOTION PICTURE PRODUCTION**

**MPP 10 (3)**  
**INTRODUCTION TO MOTION PICTURE PRODUCTION**

3 Hrs. Lec. Plus production practice hours to be arranged

Study of the basic elements of the film-making process in 8mm, including scripting, shooting and editing. The college will provide the necessary equipment. Students supply materials. (Same as Eng 56)

**MPP 11 (3)**  
**FUNDAMENTALS OF SOUND MOTION PICTURE PRODUCTION**

3 Hrs. Lec.

Prerequisite: MPP 10 or equivalent. Continued work in the 8mm medium. Practice in the skills of continuity development and of sound recording on film. Study of the aesthetics of the film medium, including the effects of sound and dynamic editing upon the viewer. Students supply materials.

**MPP 12 (3)**  
**FUNDAMENTALS OF DOCUMENTARY FILM PRODUCTION**

3 Hrs. Lec.

Prerequisite: MPP 11 or equivalent. An advanced course covering the writing, organization and production of a sound super 8 motion picture. The students will receive practice in production crew organization and cooperation. Each student crew will produce a five to 10-minute motion picture. Students supply materials.

**MPP 13 (1)**  
**TV STATION OBSERVATION, OPERATION AND MANAGEMENT I**

2 Hrs. Lab.

Prerequisite: Completion of MPP 10, enrollment in MPP 11, or its completion and permission of instructor. The student shall observe the various activities and departments at a television station. He shall become acquainted with the function of the various departments, their relationship to each other and the skills and training required to perform each major job and craft.

**MPP 54 (3)**  
**INTRODUCTION TO FILM HISTORY AND CRITICISM**

2 Hrs. Lec. 2 Hrs. Lab.  
 (Same as Eng 3, Hum 3)

**MUSIC**

**MUS 7 (3)**  
**INTRODUCTION TO MUSIC FOUNDATIONS**

3 Hrs. Lec.

An introduction to basic concepts of music. The development of the skills and knowledge needed to read music, to hear music, and to use some instrument (including the voice) with skill.

**MUS 8A (2)**  
**BEGINNING MUSICIANSHIP**

2 Hrs. Lec.

Prerequisite: Mus 7 or approval of instructor. Required of all music majors. A course designed to present basic skills and theory of music for persons interested in a background for appreciation of or further studies in music. Skills to be studied and developed are sight-singing, ear-training, keyboard harmony and basic piano skills.

**MUS 8B (2)**  
**BEGINNING MUSICIANSHIP**

2 Hrs. Lec.

Prerequisite: Mus 8A. Continuation of Mus 8A.

**MUS 8C (2)**  
**INTERMEDIATE MUSICIANSHIP**

2 Hrs. Lec.

Prerequisite: Mus 8B. A continuation of Mus 8A and 8B to increase skills in sight-singing, ear-training, and keyboard harmony.

**MUS 8D (2)**  
**INTERMEDIATE MUSICIANSHIP**

2 Hrs. Lec.

Prerequisite: Mus 8C. A continuation of Mus 8C.

**MUS 9A (3)**  
**BEGINNING HARMONY**

3 Hrs. Lec.

Prerequisite: Mus 7 or Mus 8A concurrently or consent of the instructor. Sight-singing, dictation and keyboard harmony. Traditional diatonic harmony, four-voice writing, analysis.

**MUS 9B (3)**  
**BEGINNING HARMONY**

3 Hrs. Lec.

Prerequisite: Mus 9A. A continuation of Mus 9A.

**MUS 9C (3)**  
**INTERMEDIATE HARMONY**

3 Hrs. Lec.

Prerequisite: Mus 9B. A comprehensive study of the theory of music to include skills and creative experiences in traditional harmony. An introduction to 20th century harmonic and melodic systems.

**MUS 9D (3)**  
**INTERMEDIATE HARMONY**

3 Hrs. Lec.

Prerequisite: Mus 9C. A continuation of Mus 9C.

**MUS 10A (1)**  
**BEGINNING GROUP PIANO I**

1 Hr. Lec. 2 Hrs. Lab.

A course structured to correlate those musical skills, techniques and understandings which are basic to comprehensive keyboard musicianship at the early level of study.

**MUS 10B (1)**  
**BEGINNING GROUP PIANO II**

1 Hr. Lec. 2 Hrs. Lab.

Prerequisite: Mus 10A. A continuation of Mus 10A.

**MUS 11A (1)**  
**INTERMEDIATE GROUP PIANO I**

1 Hr. Lec. 2 Hrs. Lab.

Prerequisites: Mus 10A and 10B or equivalent. A course structured for those students who have attained the performance skill competencies required in Beginning Group Piano.

**MUS 11B (1)**  
**INTERMEDIATE GROUP PIANO II**

1 Hr. Lec. 2 Hrs. Lab.

Prerequisite: Mus 11A. A continuation of Mus 11A.

**MUS 12 (1)**  
**BEGINNING CLASS GUITAR**

1 Hr. Lec. 2 Hrs. Lab.

A basic course on how to accompany with the guitar. Stress will be placed on tuning, chording, different types of strums and elementary transposition.

**MUS 13 (1)**  
**INTERMEDIATE CLASS GUITAR**

1 Hr. Lec. 2 Hrs. Lab.

Prerequisite: Mus 12 or consent of instructor. A continuation of Mus 12 with the following additions: 1. Reading music (standard musical notation); 2. A thorough presentation of bar chords including sevenths, ninths, diminished, augmented and various altered chords; 3. Advanced picking techniques.

**MUS 15A (1)**  
**BEGINNING CLASS VOICE**

1 Hr. Lec. 2 Hrs. Lab.

The student receives guidance in the performance and appreciation of the various types of solo songs while acquiring the facilities for good vocal technique. Principles are applied through group and individual singing.

**MUS 15B (1)**  
**BEGINNING CLASS VOICE**

1 Hr. Lec. 2 Hrs. Lab.

Prerequisite: Mus 15A or its equivalent. A continuation of Mus 15A.

**MUS 16 (1)**  
**INTERMEDIATE CLASS VOICE****1 Hr. Lec. 2 Hrs. Lab.**

Prerequisites: Mus 15A and Mus 15B or their equivalent. A continuation of Mus 15B.

**MUS 17ABCDEF (1-1-1-1-1-1)**  
**CHAMBER SINGERS****2 Hrs. Lec. 1 Hr. Lab.**

Prerequisite: Mus 15A or permission of the instructor. A study and performance representative of music of all styles sacred and secular, a cappella and accompanied. A minimum of six outside performances required each semester.

**MUS 18ABCDEF (1-1-1-1-1-1)**  
**CHAMBER ORCHESTRA****2 Hrs. Lec. 1 Hr. Lab.**

Prerequisite: Permission of instructor. A study and performance of literature for a small orchestra. Performances in local communities and on campus are required. Field trips to other musical events will be included to help performers develop efficient listening and evaluating practices. Solo and ensemble rehearsals and performances are included.

**MUS 19ABCDEF (1-1-1-1-1-1)**  
**INSTRUMENTAL ENSEMBLE****2 Hrs. Lec. 1 Hr. Lab.**

A performance organization specializing in literature for string, brass, woodwind and percussion ensembles, or any combination thereof. Designed for musicians who wish to explore, rehearse, and perform literature of all styles and periods.

**MUS 20A (3)**  
**HISTORY AND LITERATURE OF MUSIC****3 Hrs. Lec.**

The historical development of music with a study of various types of music from stylistic periods as a medium of cultural development. Intended as a background toward further studies in music for the music major and persons interested in a thorough background for enjoying music.

**MUS 20B (3)**  
**HISTORY AND LITERATURE OF MUSIC****3 Hrs. Lec.**

A continuation of Mus 20A.

**MUS 21ABCD (1-1-1-1)**  
**BRASS, WOODWIND AND PERCUSSION METHODS****1 Hr. Lec. 2 Hrs. Lab.**

Depth study and performance of literature for brass, woodwind, string and percussion instruments.

**MUS 25ABCDEF (1-1-1-1-1-1)**  
**STAGE BAND****2 Hrs. Lec. 1 Hr. Lab.**

Prerequisite: Mus 21A-D or audition and permission of instructor. A performance ensemble specializing in the literature of the stage and jazz band traditions. Students will be provided ensemble experiences necessary for developing and refining improvisation techniques and performance practices appropriate to jazz, rock, blues and swing music traditions.

**MUS 26ABCD (1-1-1-1)**  
**REHEARSAL AND PERFORMANCE****3 Hrs. Lab.**

Prerequisite: Permission of the instructor. Enrollment contingent upon participation in campus major musical production. Maximum credit, 1 unit per semester for four semesters. Hours to be arranged.

**MUS 27ABCDEF (1-1-1-1-1-1)**  
**CONCERT BAND****2 Hrs. Lec. 1 Hr. Lab.**

Prerequisite: Music 21A-D or audition and permission of instructor. A performance organization specializing in literature for the wind band. Students will be afforded the opportunity to develop the musical skills and understanding necessary for the highest levels of expressive ensemble performance. Scheduled public performances are a part of the course obligations.

**MUS 28ABCDEF (1-1-1-1-1-1)**  
**COLLEGE-COMMUNITY CHORUS****2 Hrs. Lec. 1 Hr. Lab.**

Open to all students who have an interest in learning to sing and who enjoy music. Breath control, tone placement, articulation and enunciation. Rehearsal, performance and study of choral literature. Introduction to music theory as a means of learning to read music rather than learning by rote.

**MUS 29ABCDEF (1-1-1-1-1-1)**  
**ESTUDIANTINA****2 Hrs. Lec. 1 Hr. Lab.**

Open to all students, particularly those of Mexican background and culture who wish to perform music stemming from the tradition of "tunas," developed during the Renaissance in Spain's large and influential universities. For singers and/or instrumentalists playing accordion, castanets, guitar, mandolin, string bass, tambourine.

**MUS 30 (3)**  
**INTRODUCTION TO MUSIC LITERATURE AND LISTENING****3 Hrs. Lec.**

An introduction to music literature with emphasis on the listening experience.

Students study the expressive meaning of music and the major forms of literature. Emphasis placed on the and understanding necessary for long music listening experiences

**MUS 31 (3)**  
**INTRODUCTION TO TWENTIETH CENTURY MUSIC****3 Hrs. Lec.**

An introduction to contemporary music. Study includes twentieth-century music, country western, and pop music with emphasis on the social artistic factors that influence the development of each.

**MUS 32ABCD (1-1-1-1)**  
**APPLIED MUSIC****1 Hr. Lec. .5 Hr. Lab. to be arranged**

Prerequisites: Declared music major and regularly enrolled in the College or currently enrolled in, or have completed three units in music courses numbered 8A through 9D. A course designed to provide students with a concentrated sequence of private instruction in a particular performing medium. One section meeting per week on campus, in addition to private instruction. Required conditions, the student must: 1) Secure a teacher approved by the college. 2) Take a minimum of one 30-minute lesson per week. 3) Meet one hour in class per week on campus for performance as scheduled and turn in weekly lesson attendance form.

**MUS 64 (1)**  
**COLLEGE-COMMUNITY BAND****2 Hrs. Lec. 1 Hr. Lab.**

A performance organization specializing in a wide range of literature for wind band. The primary objective is to provide the continuing musical performing experiences needed by community adults, music educators and advanced high school students.

**NATURAL SCIENCE****NAT SCI 51 (3)**  
**SURVEY OF THE EARTH SCIENCES****3 Hrs. Lec.**

A junior college general education course to acquaint the student with some principles of the earth sciences including sections on astronomy, meteorology, oceanography, geology and physical geography. Not open to students with credit in Geog 1, Geol 2, Geol Astron 1.

## NURSING

Imperial Valley College offers a career ladder nursing program. Students entering the program currently have two options:

1. **Vocational Nurse** - the student is eligible to write the state board examination for licensure as a vocational nurse upon successful completion of the designated prerequisites and Semester I, II and III of the nursing curriculum as outlined on page 81 of the catalog.
2. **Associate Degree Nurse** - the student is eligible to write the state board examination for licensure as a registered nurse upon successful completion of the designated prerequisites and Semesters I, II, III and IV of the nursing curriculum as outlined on page 80 of the catalog.

Students who complete the Vocational Nurse requirements including prerequisites and general education courses will be granted a Certificate of Completion from the college. Students who complete the total program, including prerequisites and general education courses, will be granted an Associate of Science degree in Nursing from the college.

The Imperial Valley College Nursing Program is fully accredited by the California Board of Registered Nursing, the Board of Vocational Nurse and Psychiatric Technician Examiners and by the National League for Nursing.

### Admission to the Program

All students who have completed the academic prerequisites with a grade of "C" or better and are in good health are eligible for admission. Admission requirements for beginning students are as follows:

1. Graduation from an accredited high school or the equivalent.
2. Admission to the college.
3. Satisfactory scores on the college placement test in English and Math or Eng 1A and Math 51.
4. A minimum G.P.A. of 2.0 in all prerequisite course work.

Students are responsible for prerequisite requirements for general education courses. Transportation to class and to clinical laboratory is the responsibility of the student.

### Application Procedure

1. Apply for admission to the college.
2. Make an appointment with the counselor to take the college placement tests in Math and English.
3. Submit two transcripts from high school and previous college work. Send one copy to the college admission office and one to the nursing office.
4. Apply for admission to the nursing program.

Students will be admitted to the program each semester. Applications will be accepted until March 1 prior to Fall admission and until August 1 for Spring admission.

### Advanced Placement

Applicants who have had previous nursing education or nursing work experience in the following areas will be considered for advanced placement:

1. Accredited Vocational or Practical Nursing Program
2. Nurse's Aide or non-accredited Vocational Nursing Program
3. Accredited Professional Nursing Courses
4. Accredited Psychiatric Technician Courses
5. Armed Services Nursing Courses
6. Certified Nurse Assistant Courses

Eligibility for transfer/challenge credit and/or advanced placement is determined on an individual basis by the Division of Nursing.

Licensed Vocational Nurses who seek advanced placement in the registered nurse curriculum have two alternatives: 1) complete the degree program, or 2) complete selected courses, which meets the California Board of Nursing thirty (30) hour option. Specific details are available in the Nursing Office. Preference will be given to those applicants who have completed applications on file in the Nursing Office two months prior to starting nursing courses.

### Progression Policies

1 - The required nursing and general education courses outlined on page 80 of the catalog must be taken in the sequence listed. Students may take some or all general education courses before entering the program but may not complete them later than the semester indicated on page 80 of the catalog. A grade point average of 2.0 must be maintained in all courses required by the nursing curriculum.

2 - Required courses in Microbiology and Anatomy/Physiology taken more than five years previous to enrollment must be repeated. Other courses are evaluated on an individual basis.

3 - Nursing courses may be repeated one time. If a student is unsuccessful a second time, he/she must contact the Director of Nursing Education and Health Technologies who will evaluate the student's academic situation and, with the student, will develop a plan of remediation.

### NS 1A (4)

#### INTRODUCTION TO PATIENT CARE I 2 Hrs. Lec. 6 Hrs. Lab.

Prerequisites: HT 1, Anat 10 or Anat 6 and Psych 1A. Theory and skills basic to the provision of safe nursing care are introduced in the classroom and the skills laboratory. Components of the nursing process are studied. Parameters of health are defined and the physical and psychological needs of the normal individual explored.

### NS 1B (4)

#### INTRODUCTION TO PATIENT CARE II 2 Hrs. Lec. 6 Hrs. Lab.

Prerequisites: NS 1A, NS 1C. Communication skills are emphasized in this course. Basic concepts concerning disruptions in health related to stress, adaptation and coping mechanisms are presented in the classroom. Concurrently in clinical sessions, the student relates learned skills and theory to care of patients with well-defined commonly occurring illnesses in the hospital setting.

### NS 1C (1.5)

#### PHARMACOLOGY I 1.5 Hrs. Lec.

Prerequisite: Admission to the Nursing Program or permission of instructor. An introductory course in Pharmacology designed to assist the student to acquire basic skills in drug dosage calculations and the administration of medications. Clinical application will be integrated into NS 1B.

### NS 2A (5.5)

#### MATERNITY CYCLE 2.5 Hrs. Lec. 9 Hrs. Lab.

Prerequisite: NS 1B. Biology 21 is required of ADN students only. The nursing process is used to assess the needs of and devise a plan of care for the pregnant woman through the maternity cycle. Consideration is given to the physiological, psychosocial, cultural and economic factors which have impact on the mother, infant and the family as a whole. Concurrent classroom and clinical experience are provided.

**NS 2B (5.5)  
COMMON HEALTH PROBLEMS I  
2.5 Hrs. Lec. 9 Hrs. Lab.**

Prerequisite: NS 2A. The first of three nine-week courses designed to provide a progressive and sequential study of common well-defined health problems is presented. Transition from wellness to illness is emphasized. Concepts acquired in previous courses are applied with increasing complexity to caring for individuals of all ages. Physiological, psychological, emotional, cultural and social concepts are integrated into the planning and implementation of nursing care. Concurrent classroom and clinical experience are provided.

**NS 2C (2)  
PHARMACOLOGY II  
2 Hrs. Lec.**

Prerequisites: NS 1B, NS 1C and Bio 21. This course focuses on those components of pharmacology related to safe nursing care of patients. It includes information about drug actions, explains possible adverse side effects and gives specific nursing implications for each drug studied. Clinical application is integrated into the clinical nursing courses.

**NS 3A (6.5)  
COMMON HEALTH PROBLEMS II  
2.5 Hrs. Lec. 12 Hrs. Lab.**

Prerequisites: NS 2B, NS 2C. The pathophysiology, treatment and nursing management of common disorders involving the respiratory, cardiovascular, endocrine and nervous systems are studied in a progressive sequence across the lifespan. Principles of growth and development are reinforced. The nursing process is utilized by the student to identify the problems and nursing interventions needed for selected patients in the clinical setting.

**NS 3B (6.5)  
COMMON HEALTH PROBLEMS III  
2.5 Hrs. Lec. 12 Hrs. Lab.**

Prerequisite: NS 3A. The pathophysiology, treatment and nursing management of common disorders involving the musculoskeletal, gastrointestinal, renal and related systems are studied in a progressive sequence across the lifespan. Principles of growth and development are reinforced. The nursing process is utilized by the student to identify the problems and nursing interventions needed for selected patients in the clinical setting. Upon successful completion of NS 3B and NS 3C, the student is eligible to write the examination for Licensed Vocational Nurse.

**NS 3C (.5-1)  
PATIENT CARE MANAGEMENT  
.5-1 Hr. Lec.**

Prerequisite: NS 2A. An overview of the leadership and management process as

it relates to management of patient care is presented. Clinical application is integrated into NS 3A, NS 3B and all subsequent nursing courses. To be taken concurrently with NS 2B.

**NS 4A (4.5)  
COMMON HEALTH PROBLEMS IV  
2 Hrs. Lec. 7.5 Hrs. Lab.**

Prerequisites: NS 3B, NS 3C. This course is concerned with an individual's response to stress and crisis. The promotion of mental health, intervention in maladaptive disorders, and the rehabilitation of chronic disorders is presented in concurrent classroom and clinical settings. Cultural and social attitudes toward behavior which deviates from accepted norms is discussed.

**NS 4B (4.5)  
ADVANCED NURSING  
2 Hrs. Lec. 7.5 Hrs. Lab.**

Prerequisite: NS 4A. In-depth study of patients with increasingly complex health problems is presented. The nursing process is used to plan and implement nursing care for a group of patients. Concurrent clinical experience in specialty area of student's choice.

**NS 4C (1)  
NURSING TRENDS  
1 Hr. Lec.**

Prerequisites: NS 3B, NS 3C. Current issues affecting nursing are discussed. Legislation, health care delivery systems and legal and ethical aspects of health care are integrated into the clinical component of NS 4B. Upon successful completion of NS 4B and NS 4C, the student is eligible to write the examination for Registered Nurse.

The following courses are a part of the nursing program which is being phased out. They will be terminated at the end of the spring semester, 1984.

**ADN 3 (11)  
ASSOCIATE DEGREE NURSING  
5 Hrs. Lec. 18 Hrs. Lab.**

Prerequisite: ADN 2. ADN 5A taken concurrently. Using the nursing process and knowledge and principles from the natural and behavioral sciences, attitudes, skills and the caring role are developed in meeting needs of the family during the maternal cycle. Emphasis is on the normal cycle, with consideration to common complications. Emphasis also placed on the ill, abused and neglected child, and on adults with problems of sexuality. Mental health concepts stressed. Clinical experiences provided in hospital and community agencies. Experience through limited home visits to an expectant family also provided.

**ADN 4 (11)  
ASSOCIATE DEGREE NURSING  
5 Hrs. Lec. 18 Hrs. Lab.**

Prerequisite: ADN 3. ADN 5B taken concurrently. Using scientific, psychosocial, and nursing principles, attitudes and skills are developed to plan, implement, and evaluate comprehensive nursing care. Common and complex health problems interfering with needs of adults and children are studied. Special consideration is given to the aged, and to cultural/ethnic and sexual aspects of care. Clinical experiences in the acute and long term hospitals are concurrent, and opportunities given to participate in leadership and group nursing management.

**ADN 5A (1)  
DEVELOPMENT OF CONTEMPORARY NURSING  
1 Hr. Lec.**

Prerequisite: ADN 2. ADN 3 taken concurrently. Historical influence in nursing and health care. Contemporary state-registered nurses. Cultural, spiritual, ethical and social components of nursing. The law and the nursing student.

**ADN 5B (1)  
NURSING TRENDS AND OPPORTUNITIES  
1 Hr. Lec.**

Prerequisite: ADN 3 and ADN 5A. ADN 3 taken concurrently. Contemporary problems and trends in nursing. Legal and ethical aspects. Legislation affecting health care. Organizations and publications. Career opportunities. Personal responsibility for professional growth.

**NURSING-CONTINUING EDUCATION**

**Registered Nursing**

Prospective students are advised to check with the college previous to each semester concerning continuing education courses to be offered. New courses are offered periodically as community health agency and health personnel needs are identified. A "Materials Special Services Fee" will be charged. All courses have been approved by California Board of Registered Nurses, BRN Provider No. 00294, and meet requirements for relicensure.

**RN 38 (1/2-3)  
THIS YEAR'S ISSUES IN HEALTH CARE  
1/2-3 Hrs. Lec.**

A variety of lectures, seminars, workshops, covering current issues in community health care and/or nursing will be offered each semester for health personnel interested in securing Continuing Education credit and/or expanding and updating their knowledge in health related fields. Such topics



Cardiac Arrhythmia Recognition, Neonatal Nursing, Body Fluids and Electrolytes, Creative Supervisory Skills, Renal Dialysis, Respiratory Care, CPR Provider, CPR Instructor, Advanced Life Support, Pharmacology will be included. Programs will be 2 hours or more in length; attendance hours accumulated within one semester totaling a minimum of 9 will earn ½ college unit and increments of 9 hours thereafter will earn ½ college unit up to a total of 54 attendance hours, which will earn 3 college units. C.E. certificates will be issued for each program. (Same as VN 38, HA 38)

**RN 39 (6)  
NURSING THE ACUTELY ILL  
6.7 Hrs. Lec.**

Prerequisites: ADN 5AB, VN 56 or equivalent (with permission of instructor and completion of a Basic Arrhythmia Recognition course - this may be challenged.) An intensive review of cardiovascular, pulmonary, autonomic nervous and renal systems and the disease processes involved. Nursing care and nursing assessment of the acutely ill patient. Comprehensive study in electrocardiography and analysis of arrhythmias, drug management, fluid and electrolyte balance. Emergency nursing measures explored in detail. (Total hours for completion of course are 120 hours lecture.) (Same as VN 39) (Formerly RN 20)

**RN 40 (2)  
INTRAVENOUS THERAPY  
TECHNIQUE  
1.8 Hrs. Lec. .3 Hr. Lab.**

Prerequisite: ADN 5AB, VN 56 or equivalent. A course of instruction in intravenous therapy and the practice of venipuncture and blood withdrawal. Total hours for completion of course are 33 hours lecture and 6 hours laboratory. (Same as VN 40, HA 40) (Formerly RN 26)

**Vocational Nursing**

Prospective students are advised to check with the college previous to each semester concerning continuing education courses to be offered. New courses are offered periodically as community health agency and health personnel needs are identified. A "Materials and Special Services Fee" will be charged. All courses have been approved by the California Board of Vocational Nurse and Psychiatric Technician Examiners, BUNPT Provider No. 00294, and meet the requirements for relicensure.

**VN 38 (½-3)  
THIS YEAR'S ISSUES IN HEALTH  
½-3 Hrs. Lec.  
(Same as RN 38, HA 38)**

**VN 39 (6)  
NURSING THE ACUTELY ILL  
6.7 Hrs. Lec.  
(Same as RN 39) (Formerly VN 20)**

**VN 40 (2)  
INTRAVENOUS THERAPY  
TECHNIQUE  
1.8 Hrs. Lec. .3 Hr. Lab.  
(Same as RN 40, HA 40) (Formerly VN 26)**

**PHILOSOPHY**

**PHIL 1A (3)  
INTRODUCTION TO PHILOSOPHY  
3 Hrs. Lec.**

Man's interpretation of the nature and meaning of reality. Emphasis placed upon the existence of God, free will and mind-body problems.

**PHIL 1B (3)  
INTRODUCTION TO PHILOSOPHY  
3 Hrs. Lec.**

The place of philosophy in intelligent living and the methods and significance of philosophical inquiry. Emphasis is placed upon problems of value and human nature. Phil 1B may be taken before Phil 1A.

**PHIL 10 (3)  
LOGIC  
3 Hrs. Lec.**

An introduction to deductive and inductive logic. Attention focused upon the relationship between logic and language, fallacies, and the use of logic in everyday life.

**PHIL 11 (3)  
ETHICS  
3 Hrs. Lec.**

An introduction to significant and typical value theories and systems, and of the concrete problems such theories seek to explain. Emphasis placed upon teaching students to critically analyze their own value systems.

**PHIL 25 (3)  
RELIGIONS OF THE MODERN WORLD  
3 Hrs. Lec.**

An introduction to the various contemporary religions of the world with an emphasis on their historical development. Study of basic beliefs of such religions as Hinduism, Buddhism, Taoism, Zen.

**PHOTOGRAPHY**

**PH 5 (3)  
INTRODUCTION TO PHOTOGRAPHY  
2 Hrs. Lec. 3 Hrs. Lab.**

The basic theory, techniques, skills and artistic expression of photography. Consideration will be given to factors

such as correct use of cameras and lenses, determination of exposure, different types of film and filters, lighting, principles of composition, and the legal aspects of photography. Print production will be covered by sections on dark-room techniques, photographic chemicals, development of film, contact printing, and enlargement techniques. The student will provide an adjustable camera for assignment work. The concept of photography as an art form will be introduced, and projects requiring artistic expression will be assigned. (Same as Jrn 5)

**PH 6 (3)  
INTERMEDIATE PHOTOGRAPHY  
2 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: Ph 5/Jrn 5 or permission of the instructor. Psych 1A is recommended. A continuation of Ph 5/Jrn 5 with emphasis on lighting, basic poses and studio work. Posing of the subject and visualization of the finished picture will be stressed, with further practice in camera operation and film processing.

**PH 7 (3)  
ADVANCED PHOTOGRAPHY  
2 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: Ph 5 and Ph 6 or equivalent. A continuation of Ph 6 with emphasis on advanced studio and location work and on illustrative photography including magazine covers, fashion and lay-out.

**PH 8 (3)  
MULTI-MEDIA  
3 Hrs. Lec.**

Prerequisites: Ph 5 and Ph 6. Ph 7 recommended. An introduction to color slides and motion picture production through the use of sequence stills, employing all techniques used in previous photographic courses. Emphasis will be given to the following areas: script writing, sound track, exposing of color film, camera techniques.

**PHYSICAL EDUCATION**

Unless exempt, each student is required by district policy to schedule one activity course each semester. A student may take A-B-C-D sections of the same course, but not in the same semester.

**PE 1 (4)  
PHYSICAL EDUCATION ACTIVITY -  
MILITARY SERVICE**

Prerequisite: The satisfactory completion of one year or more in the military service of the United States. The student wishing credit for military service must present his DD214 or equivalent supporting document to the Admissions

Office. If the student signs up for the class for military credit and does not submit verification of service, he will be dropped as a No-Show and will not receive credit. PE 1 does not count for units toward VA or full-time student status. These hours are not contact hours. This course meets the physical education requirement, but may be taken only once.

**PE 2ABCD (1-1-1-1)  
GYMNASTICS, COED  
2 Hrs. Lab.**

Gymnastics involves the use of heavy apparatus plus free exercise and free calisthenics for individual development and performance. Instruction is given concerning group stunts and rules concerned with competition and exhibitions. Emphasis is put on safety techniques associated with gymnastics.

**PE 3ABCD (1-1-1-1)  
PHYSICAL FITNESS, WOMEN  
2 Hrs. Lab.**

This course is designed to emphasize physical conditioning and development. Equips the student with a repertoire of exercises and conditioning activities which can be used to maintain physical fitness throughout college and adult life.

**PE 5ABCD (1-1-1-1)  
SWIMMING, COED  
2 Hrs. Lab.**

This course is concerned with teaching the student to successfully execute the proper strokes for swimming. Skills, fundamentals and safety knowledge are stressed from the beginner to the intermediate swimmer.

**PE 6 (2)  
LIFESAVING**

**1½ Hrs. Lec. 1½ Hrs. Lab.**

Prerequisite: PE 5B or approval of instructor. Techniques of life saving and water safety. This course meets requirements of the Red Cross Senior Life Saving Certificate.

**PE 7 (2)  
WATER SAFETY INSTRUCTOR  
TRAINING**

**1 Hr. Lec. 2 Hrs. Lab.**

Prerequisite: Advanced Life-saving card for W.S.I. A course designed to acquaint the student with the basic principles of instructing beginning, intermediate, and advanced water safety skills. It will also prepare the student to teach basic rescue and advanced life-saving, CPR, and basic first aid as it applies to water safety procedures. Successful completion of this course may include certification as an American Red Cross Water Safety Instructor and as a CPR Instructor.

**PE 8ABCD (1-1-1-1)  
BOWLING, COED**

**2 Hrs. Lab.**

Etiquette, rules, background and techniques of bowling are stressed in the course. Basic skills and score keeping are emphasized. Social etiquette of the game is stressed along with the worthy use of leisure time.

**PE 9ABCDEFGH (1-1-1-1-1-1-1-1-1)  
ADAPTED PHYSICAL EXERCISES,  
COED**

**2 Hrs. Lab.**

Open only to students who are unable to participate in regular physical education program. The course is specifically designed to meet the individual needs of these students.

**PE 10ABCD (1-1-1-1)  
TEAM SPORTS**

**2 Hrs. Lab.**

The course is designed to stimulate the development of mental and physical alertness and poise, and to encourage regular participation in a variety of sports. Includes coeducational activities.

**PE 11ABCD (1-1-1-1)  
VOLLEYBALL, COED**

**2 Hrs. Lab.**

A course designed to present the basic fundamentals of volleyball such as the serve, setting, spiking, and team play. Rules and class competition are included.

**PE 12ABCD (1-1-1-1)  
TENNIS, COED**

**2 Hrs. Lab.**

Tennis offers training in the basic fundamentals of the game including history, rules and etiquette. Social etiquette of the game is stressed along with the worthy use of leisure time. Tournament competition in singles and doubles is emphasized.

**PE 13 (1)  
ADVANCED TENNIS, COED**

**2 Hrs. Lab.**

Prerequisite: PE 12ABCD or approval of instructor. Review and practice of forehand, backhand, serve and volley, overhead smash and lob. Emphasis on court strategy and tactics for singles and doubles competition.

**PE 14ABCD (1-1-1-1)  
RECREATIONAL GAMES, COED**

**2 Hrs. Lab.**

Designed to offer students a chance to participate in many activities not otherwise offered in the physical education curriculum. Recreation majors, physical education majors, and those just interested in setting up community recreation centers will find this course most valuable. Meets physical education activity requirement.

**PE 17ABCD (1-1-1-1)  
PHYSICAL FITNESS, MEN**

**2 Hrs. Lab.**

This course is designed to emphasize physical conditioning and development. Equips the student with a repertoire of exercises and conditioning activities which can be used to maintain physical fitness throughout college and adult life.

**PE 18ABCD (1-1-1-1)  
GOLF, COED**

**2 Hrs. Lab.**

Offers training in the fundamentals of golf with irons, woods and putter. Includes rules and etiquette of the game. Actual participation upon a golf course and the worthy use of leisure time are emphasized.

**PE 20ABCD (1-1-1-1)  
SOFTBALL, COED**

**2 Hrs. Lab.**

This course is designed to emphasize the fundamentals, knowledge of rules, coaching techniques and basic knowledge of the game of softball.

**PE 21ABCD (2-2-2-2)  
ADVANCED SPORTS ACTIVITY,  
COED**

**1 Hr. Lec. 3 Hrs. Lab.**

Prerequisite: Prior competitive background or permission of the instructor. This course is designed for students with previous experience in the sport of volleyball and basketball. The course will cover basic fundamentals as well as advanced team strategies found in competitive situations. A minimum of fifteen hours per semester for each student required in outside activities such as community sports and recreational programs.

**PE 22ABCD (1-1-1-1)  
RACQUETBALL AND HANDBALL,  
COED**

**2 Hrs. Lab.**

Instruction and development of racquetball and handball skills. Presentation of singles and doubles play, including basic strategy and strategy.

**PE 23ABCD (1-1-1-1)  
BASKETBALL FOR WOMEN  
2 Hrs. Lab.**

Designed for women students interested in basketball. To offer basic and advanced fundamentals, team play and strategy.

**PE 24ABCD (1-1-1-1)  
BASKETBALL FOR MEN  
2 Hrs. Lab.**

An introduction to the fundamentals and strategy of the game. Rules and class competition are included in the course.

**PE 26ABCD (1-1-1-1)  
MODERN DANCE, COED  
2 Hrs. Lab.**

Participation and instruction in rhythmic fundamentals, factors related to movement, movement fundamentals and dance skills, creative activity, and evaluation. Designed to develop the student's ability to use expressive body movements in a creative art form. More complex individual dance sketches and small group dance studies.

**PE 28ABCD (2-2-2-2)  
DANCE THEATER, COED**

**3 Hrs. Lab. 1 Hr. by arrangement**  
Prerequisite: Permission of the instructor. A performance group presenting all forms of dance and related theatre arts. A minimum of five outside performances required each semester. Meets physical education activity requirement.

**PE 29ABCD (1-1-1-1)  
JAZZ DANCE, COED  
2 Hrs. Lab.**

A study of syncopated movement.

**PE 30ABCD (2-2-2-2)  
SONG AND CHEER  
4 Hrs. Lab.**

Practice and performance class for songleaders and cheerleaders. Satisfies physical education activity class requirement.

**PE 31AB (2-2)  
INTERCOLLEGIATE FOOTBALL  
AND P.E.**

**Hours to be arranged**  
Theory and practice of competitive football. Limited to students trying out for varsity team. The students must schedule for a minimum of 10 hours per week.

**PE 32ABCD (2-2-2-2)  
INTERCOLLEGIATE BASKETBALL  
AND P.E.**

**Hours to be arranged**  
Theory and practice of basketball. Limited to students trying out for varsity team. The student must schedule for a minimum of 10 hours per week.

**PE 33AB (2-2)  
INTERCOLLEGIATE TRACK AND P.E.  
Hours to be arranged**

Theory and practice of track. Limited to students trying out for varsity team. The student must schedule for a minimum of 10 hours per week.

**PE 34AB (2-2)  
INTERCOLLEGIATE BASEBALL  
AND P.E.**

**Hours to be arranged**  
Theory and practice of baseball. Limited to students trying out for varsity team. The student must schedule for a minimum of 10 hours per week.

**PE 35ABCD (2-2-2-2)  
INTERCOLLEGIATE WRESTLING  
AND P.E.**

**Hours to be arranged**  
Theory and practice of wrestling. Limited to students trying out for varsity team. The student must schedule for a minimum of 10 hours per week.

**PE 36AB (2-2)  
INTERCOLLEGIATE GOLF AND P.E.  
Hours to be arranged**

Theory and practice of golf. Limited to students trying out for varsity team.

**PE 37AB (2-2)  
INTERCOLLEGIATE CROSS  
COUNTRY AND P.E.**

**Hours to be arranged**  
Intercollegiate cross country running over a four-mile course. The student must schedule for a minimum of 10 hours per week.

**PE 38AB (2-2)  
INTERCOLLEGIATE TENNIS AND P.E.  
Hours to be arranged**

Eligibility will be determined by Desert Conference rules; however, "redshirts" will be permitted to take the class and work out with the team. IVC guidelines in the AS Handbook for athletics will also apply. Team membership will be the top seeded 8-10 players. Open to both men and women.

**PE 40ABCD (2-2-2-2)  
SYNCHRONIZED SWIMMING  
4 Hrs. Lab.**

Prerequisite: Consent of instructor. Synchronized swimming is the concept of swimming as an art form. The swimmer executes movements in time with music as a solo performer or in time with other swimmers.

**PE 41AB (2-2)  
INTERCOLLEGIATE VOLLEYBALL  
AND P.E.**

**Hours to be arranged**  
Prerequisites: Eligibility will be determined by Desert Conference rules. IVC guidelines in the Associated Students' Handbook for Athletics will also apply. This course is designed to give the individual a well-rounded knowledge in volleyball. The course should help develop a relationship of athletics to other matters such as exercise, recreation, sportsmanship and competition. The student must schedule for a minimum of 10 hours per week.

**PE 42AB (2-2)  
INTERCOLLEGIATE SOCCER  
AND P.E.**

**Hours to be arranged**  
Theory and practice of soccer. Limited to students trying out for a varsity team. The student must schedule for a minimum of 10 hours per week.

**PE 43AB (2-2)  
INTERCOLLEGIATE SOFTBALL  
AND P.E.**

**Hours to be arranged**  
Theory and practice of women's softball. Limited to students trying out for varsity team. The students must schedule for a minimum of 10 hours per week.

**PE 44 (1)  
DEFENSIVE TACTICS  
2 Hrs. Lab.**

(Same as LE 23)

**PE 47 (2)  
COACHING TECHNIQUES OF  
WRESTLING  
2 Hrs. Lec.**

Course designed to prepare physical education students with the basic knowledge of wrestling fundamentals and coaching techniques. Organization of new programs and conducting of tournaments.

**PE 50 (2)  
INTRODUCTION TO PHYSICAL  
EDUCATION  
2 Hrs. Lec.**

Principles and organization of physical education and areas of specialization within the field.

**PE 51 (2)  
STRUCTURING INTRAMURALS  
1 Hr. Lec. 2 Hrs. Lab.**

Prerequisite: Basic knowledge and/or experience in competitive sports and recreational games. The course is designed to provide students experience in structuring various types of sports and recreation tournaments through assisting in the IVC intramural program.

**PE 52AB (2-2)  
THEORY OF BASEBALL  
2 Hrs. Lec.**

A history of the game, knowledge of rules, current and possible future trends in the game, coaching techniques and scouting. Recommended for physical education majors, potential coaches and recreation majors.

**PE 53AB (2-2)  
THEORY OF BASKETBALL, COED  
2 Hrs. Lec.**

This course is designed for physical education majors, recreation majors and potential coaches. Coaching techniques and theories, history, rules and current and possible future trends in the game will be offered.

**PE 54AB (2-2)  
THEORY OF FOOTBALL  
2 Hrs. Lec.**

Provides students with fundamental concepts, theories and techniques of coaching and playing intercollegiate and interscholastic football.

**PE 55AB (2-2)**  
**THEORY OF WOMEN'S TEAM**  
**SPORTS, COED**  
**2 Hrs. Lec.**

This course is designed for those interested in women's volleyball, basketball and softball as potential coaches. Provides students with knowledge of fundamental concepts, theories and techniques of coaching and playing these sports.

**PE 56 (2)**  
**CARE AND PREVENTION OF**  
**ATHLETIC INJURIES**  
**2 Hrs. Lec.**

This course is designed for the coach, coach-trainer, physical education and recreation student. Emphasizes the screening and conditioning of athletes, prevention, care and treatment of athletic injuries. Includes techniques of applying supportive materials, rehabilitation of injuries and use of therapeutic modalities. Organization of a new athletic training program.

**PE 58 (2)**  
**PSYCHOLOGY OF COACHING**  
**2 Hrs. Lec.**

Prerequisites: Sophomore status or permission of instructor. A course covering all the aspects of the psychology of coaching sports. Includes certain guides to show how teaching and learning may be applied to the coaching of sports, and to bring out the relationship of meaningful learning to successful athletic coaching.

**PE 59AB (3-3)**  
**SPORTS OFFICIATING, MEN**  
**2 Hrs. Lec. 3 Hrs. Lab.**

Theory and practice in the techniques of officiating in highly organized games and sports such as basketball, football, wrestling, baseball, track and tennis. Students must plan for an additional three hours per week to officiate at elementary schools.

**PE 60AB (3-3)**  
**SPORTS OFFICIATING, WOMEN**  
**2 Hrs. Lec. 3 Hrs. Lab.**

To familiarize prospective physical education majors and minors with the rules of team and individual sports for girls.

**PE 61 (3)**  
**PHYSICAL EDUCATION IN THE**  
**ELEMENTARY SCHOOL**  
**3 Hrs. Lec.**

This course is designed to prepare the elementary school teacher to teach the whole child through physical education.

**PE 62AB (3-3)**  
**PHYSICAL EDUCATION FOR SPECIAL**  
**OLYMPICS**  
**2 Hrs. Lec. 2 Hrs. Lab. plus 2 Hrs. Lab. to be arranged**

A course designed to train college students to condition and prepare retarded persons for competition in Special Olympics.

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**PHYSICALLY LIMITED**

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**PL 1 (3)**  
**UNDERSTANDING EXCEPTIONAL**  
**STUDENTS**

**2 Hrs. Lec. 2 Hrs. Lab.**

Prerequisite: Psych 20/ECE 20 or Psych 1A. A psycho-educational approach to the study of exceptional students including physical, mental, emotional, sensory, speech, and learning disabilities. Designed for parents, as well as, for teachers and paraprofessionals working with exceptional students. Surveys the entire exceptional spectrum from gifted to retarded through observation, participation and lecture. Students will learn how to develop teaching strategies for all the exceptions. (Same as ECE 27/Psych 27)

**PL 2AB (2-2)**  
**PRACTICUM EXPERIENCE TO WORK**  
**WITH THE PHYSICALLY LIMITED**  
**PERSON**

**5 Hrs. Lab.**

Prerequisite: PL 1 and completion or current enrollment in Psych 1A or Psych 5 and Option A, B, or C as indicated in the Rehabilitation Technician Major/Certificate, or by demonstrated competency. A course designed to extend the experience of Rehabilitation Technician majors who wish to explore a specific area of contact with physically limited individuals. Experience may be gained on the college campus or in the field with deaf, blind or orthopedically handicapped individuals. This course may be repeated to provide experience in a second area. Course may be taken for credit or letter grade.

**PL 3 (1-6)**  
**SURVEY OF CAMPUS LIFE FOR THE**  
**PHYSICALLY LIMITED**

**1-6 Hrs. Lec.**

This course is designed to help prepare the physically limited student for full or adaptive participation in community college activities, academic, social, vocational and environmental.

**PL 4AB (2-2)**  
**LIVING WITH A HEARING LOSS**  
**2 Hrs. Lec.**

A course designed to help reduce the communication barriers often present when a person has a hearing loss. The

nature of each loss, the use of hearing aids, factors influencing lipreading ability, and problems arising from living with a hearing loss will be discussed. This course is designed specially for the mature person who has an acquired hearing loss.

**PL 6ABCDEF GH (1-4)**  
**PERSONAL AND SOCIAL**  
**ADJUSTMENT FOR THE PHYSICALLY**  
**LIMITED**

**1-4 Hrs. Lec.**

This course is designed to help the physically limited students who have difficulty in adjusting to the educational complexities encountered in college level classes because of deficiencies in their educational backgrounds.

**PL 10 (4)**  
**BEGINNING COMMUNICATION WITH**  
**THE DEAF**

**5 Hrs. Lec.**

An introduction to American sign language, designed to provide basic communication skill and increased awareness of the psychology of an individual with a severe hearing impairment. This course will include definitions of hearing loss, history of deaf education and problems of communication, as well as emphasizing vocabulary development, syntax and idiomatic expressions used by the "typical" deaf adult.

**PL 11 (4)**  
**INTERMEDIATE COMMUNICATION**  
**WITH THE DEAF**

**5 Hrs. Lec.**

Prerequisite: Completion of PL 10. Vocabulary enrichment and fingerspelling drill designed to increase speaking accuracy and rhythm in expressive sign language and improved receptive ability. Emphasis will be placed upon clarity of performance and appropriateness of vocabulary. There will be increased opportunities to interpret from spoken English to Manual English to prepare for the interpreter certification.

**PL 12 (3)**  
**ADVANCED COMMUNICATION**  
**WITH THE DEAF**

**3 Hrs. Lec.**

Prerequisites: Completion of PL 10 and PL 11 or permission of the instructor. This course is designed for the student with extensive sign vocabulary who desires skills for interpreting for the deaf in the classroom or other social situations.

**PL 13ABCD (1-1-1-1)**  
**COMMUNICATION WITH THE DEAF**  
**IN THE COLLEGE CLASSROOM**

**1 Hr. Lec.**

Prerequisites: PL 10, PL 11, PL 12 or permission of the instructor. This course is designed for deaf students at IVC and students assisting as interpreters in class.

**PL 20 (3)  
LITERARY BRAILLE  
3 Hrs. Lec.**

This course is designed to familiarize the student thoroughly with the braille system for literary braille, braille contractions and their usage and with the rules of transcribing braille as well as practice in reading braille.

**PL 21 (3)  
PSYCHOLOGY OF PHYSICAL  
DISABILITIES  
3 Hrs. Lec.**

An introduction to psychological theory as it has been applied to the individual with a physical disability. The course will include discussion of what is lost in a physical disability, cultural attitudes toward disability, disability and personality, special problems of the atypical physique and adjustment in the physically handicapped.

**PL 22ABCDEFGH (2-2-2-2-2-2-2-2)  
THE ART OF CONVERSATION  
2 Hrs. Lec.**

The development of a set of skills that will improve conversation abilities and skills.

**PL 23ABCDEFGH (2-2-2-2-2-2-2-2)  
TACTILE ART FOR THE PHYSICALLY  
LIMITED  
4 Hrs. Lab.**

This course is designed to enrich the aesthetic experience of the physically limited. Students will explore various art medias and methods.

**PL 24ABCDEFGH (1-1-1-1-1-1-1-1)  
GENERAL AND APPLIED MUSIC FOR  
THE VISUALLY HANDICAPPED  
2 Hrs. Lab.**

A course to provide experience with general music in terms of listening skills, elements, basic structure and style. Application of skills involving sensitivity to rhythm, pitch, sound and structure of music with individual and group participation in singing and in rhythmic accompaniment. Course designed for the visually handicapped.

**PL 30 (3)  
INTRODUCTION TO SPEECH AND  
LANGUAGE  
3 Hrs. Lec.**

This course is designed to acquaint students with the normal speech and language developmental sequence, and introduce them to deviations from normal patterns. Etiology, characteristics, and prognosis for various speech and language disorders will be explored.

**PL 31 (3)  
INTERVIEWING AND TESTING  
TECHNIQUES FOR SPEECH AND  
HEARING PROBLEMS  
3 Hrs. Lec.**

A course designed to acquaint students with good interview techniques, and to provide experience in administration of basic speech and language screening materials. The students will gain insight into test design and factors affecting test outcomes.

**PL 32 (3)  
BEHAVIOR MODIFICATION  
TECHNIQUES FOR SPEECH AND  
HEARING PATHOLOGY  
3 Hrs. Lec.**

Prerequisite: Psych 1A or Psych 5 and PL 30 or permission of the instructor. A course designed to introduce the students to principles of behavior modification as used in speech and hearing pathology, to enable them to isolate modifiable behavior, and to successfully modify simple behavior patterns.

**PL 33 (3)  
INTRODUCTION TO AUDIOLOGY  
3 Hrs. Lec. 1 Hr. Lab.**

This course includes an introduction to the science of hearing, fundamentals of acoustics as they apply to audiometric testing, basic anatomy and physiology of the hearing mechanism, pathologies causing impaired hearing, interrelationship of hearing to speech and language development, and familiarization with audiologic assessment and clinical procedures.

**PL 34 (3)  
AUDIOMETRY AND HEARING  
CONSERVATION  
3 Hrs. Lec. 1 Hr. Lab.**

Prerequisite: PL 33 recommended. This course includes identification audiometry, pre-school hearing screening, industrial audiometry, and the role of the audiometrist, nurse-audiometrist and speech-hearing therapist in the total conservation of hearing program.

**PL 40 (3)  
INTRODUCTION TO PHYSICAL  
THERAPY  
3 Hrs. Lec.**

A course dealing with the most common types of neurological and orthopedic problems and various methods of physical therapy used in treatment of these problems.

**PL 41 (3)  
INTRODUCTION TO OCCUPATIONAL  
THERAPY  
3 Hrs. Lec.**

An introduction to the basic philosophy, principles and techniques used in occupational therapy. This course will survey rehabilitation of specific disabilities,

facilities employing O.T. specialists, neuro-muscular integration, activities of daily living, principles of self-care, personal hygiene and transfer techniques. Activities and field trips to clinics are required.

**PL 50 (3)  
SHOP MATHEMATICS  
3 Hrs. Lec.**

(Same as Ag 50, AT 50, Math 50 and Weld 50)

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**PHYSICAL SCIENCE**

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**PHYS SCI 25 (4)  
INTRODUCTION TO PHYSICAL  
SCIENCE  
3 Hrs. Lec. 3 Hrs. Lab.**

Selected topics in physical science. The relations of physical science to modern life through emphasis on the scientific method. Designed for those intending to take only one semester of physical science. May be combined with Bio 3 for a year course in the basic principles of natural science.

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**PHYSICS**

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**PHYS 2A (4)  
GENERAL PHYSICS  
3 Hrs. Lec. 3 Hrs. Lab.**

Prerequisites: Algebra; trigonometry strongly recommended. Principles of mechanics and heat. Statics, uniform motion, accelerated motion, work and energy, impulse and momentum, fundamentals of heat and heat flow, properties of gases.

**PHYS 2B (4)  
GENERAL PHYSICS  
3 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: Phys 2A. Simple harmonic motion, sound, doppler effect, acoustical phenomena, electrostatics, current electricity, Ohm's Law, light, spectroscopy, geometric optics, modern physics.

**PHYS 4A (4)  
PRINCIPLES OF PHYSICS  
3 Hrs. Lec. 4 Hrs. Lab.**

Prerequisite: Credit for or concurrent enrollment in Math 3A. This course is designed to give an understanding in the fundamental principles of mechanics.

**PHYS 4B (4)  
PRINCIPLES OF PHYSICS  
3 Hrs. Lec. 4 Hrs. Lab.**

Prerequisite: Phys 4A and credit or concurrent enrollment in Math 3B. This course is designed to give an understanding of the fundamental principles of physics in the areas of electricity and magnetism.

**PHYS 4C (4)**  
**PRINCIPLES OF PHYSICS**  
**3 Hrs. Lec. 4 Hrs. Lab.**

Prerequisites: Phys 4A and credit or concurrent enrollment in Math 3B. This course is designed to give an understanding of the fundamental principles of physics in the area of heat, wave motion, sound, light, and modern physics.

**PHYSIOLOGY**

**PHYSIO 1 (4)**  
**HUMAN PHYSIOLOGY**  
**2 Hrs. Lec. 6 Hrs. Lab.**

Prerequisites: One year each of high school chemistry and biology or one semester each at the college level. The functions of the human body; emphasis on the circulatory, muscular, and nervous systems.

**POLITICAL SCIENCE**

**POLY SCI 1 (3)**  
**INTRODUCTION TO POLITICAL SCIENCE**  
**3 Hrs. Lec.**

An introduction to the theories, principles and problems of modern political life and the methods of studying and acquiring political knowledge. Illustrative materials drawn primarily from the American experience. This course and either Poly Sci 2 or Hist 17A will meet graduation requirements in American institutions.

**POLY SCI 2 (3)**  
**AMERICAN GOVERNMENT AND POLITICS**  
**3 Hrs. Lec.**

The origin, development and operation of local, state and national political institutions in the United States emphasizing the contemporary operations of the American political system. This course and either Poly Sci 1 or Hist 17B will meet graduation requirements in American institutions. May be taken before Poly Sci 1.

**POLY SCI 3 (3)**  
**COMPARATIVE POLITICS**  
**3 Hrs. Lec.**

Prerequisite: Poly Sci 1 or 2. A comparative study of modern political systems. Emphasis upon patterns of political action and problems of decision-making in various cultural contexts.

**POLY SCI 14 (3)**  
**INTRODUCTION TO INTERNATIONAL RELATIONS**  
**3 Hrs. Lec.**

An introductory course stressing the techniques of analysis of the basic factors making for conflict and adjust-

ment in contemporary international relations. Problems of nationalism and imperialism, elements of national power, causes of war, methods of seeking peace, the role of international organizations, and the foreign policies of the major powers will be considered. Emphasis will be upon contemporary developments.

**PSYCHOLOGY**

**PSYCH 1A (3)**  
**GENERAL PSYCHOLOGY**  
**3 Hrs. Lec.**

Prerequisite: Twelfth grade reading level ability is recommended for success in this course. An introduction to the fundamental principles and concepts of human behavior. Includes consideration of human development, learning, biological basis of behavior, maladaptive behavior, mental health, motivation and emotion.

**PSYCH 1B (3)**  
**ADVANCED GENERAL PSYCHOLOGY**  
**3 Hrs. Lec.**

This course is designed to explore the methods of psychological inquiry, the principles of learning (including classical conditioning, operant conditioning, and social learning theory), and the principles of perception (including the physiological basis for perception and interpersonal perception).

**PSYCH 2 (3)**  
**INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY**  
**3 Hrs. Lec.**

Prerequisite: Psych 1A preferred. An introduction to the function of experimental methodology in the investigation of physiological processes in psychology. Emphasis is placed upon those physiological mechanisms which provide a basis for perception, learning, motivation, and other complex patterns of behavior.

**PSYCH 3 (3)**  
**PSYCHOLOGY OF PERSONAL AND SOCIAL ADJUSTMENT**  
**3 Hrs. Lec.**

A study of development of the normal personality, focusing on common difficulties of social and emotional adjustment. Various views of personality structure and approaches to personal growth are discussed. (Same as TA 3)

**PSYCH 5 (3)**  
**PSYCHOLOGY OF EFFECTIVE BEHAVIOR**  
**3 Hrs. Lec.**

A survey of some of the relevant psychological facts, principles, and concepts involved in the experience and problems

of everyday living. An experiential approach, including emphasis upon effective behavioral alternatives in parent/interpersonal relations, values clarification as well as proven methods of successful study.

**PSYCH 7 (.5)**  
**PSYCHOLOGY LEARNING LAB**  
**1 Hr. Lab.**

Prerequisite: Current enrollment in Psychology 1A. This class is designed as a learning aid for students taking Psychology 1A. The class will review general concepts from Psychology 1A, and discuss strategies for improving study techniques.

**PSYCH 8 (3)**  
**PERSONAL AND CAREER DEVELOPMENT**  
**3 Hrs. Lec.**

(Same as HR 8)

**PSYCH 9 (3)**  
**INTERVIEWING AND COUNSELING**  
**3 Hrs. Lec.**

(Same as HR 9)

**PSYCH 10 (3)**  
**SMALL GROUP LEADERSHIP**  
**3 Hrs. Lec.**

(Same as HR 10)

**PSYCH 11AB (3-3)**  
**PRACTICUM**  
**1 Hr. Lec. 6 Hrs. Lab. field experience per week**  
 (Same as HR 11AB)

**PSYCH 12 (3)**  
**ELEMENTARY STATISTICS**  
**3 Hrs. Lec.**

Prerequisite: Math A or equivalent (Same as Bus 26/Math 12)

**PSYCH 14 (3)**  
**ABNORMAL PSYCHOLOGY**  
**3 Hrs. Lec.**

Prerequisites: Psych 1A. Recommended: Psych 2 and Psych 3. This course views the causes and problems of disordered behavior. Current practices in therapy and prevention are emphasized. The topics of anxiety and fear, psychoses, neuroses, organic and functional psychoses are included.

**PSYCH 15 (3)**  
**SOCIAL AND PSYCHOLOGICAL DYNAMICS OF DRUG USE**  
**3 Hrs. Lec.**

Prerequisite: Completion of, or concurrent enrollment in, Psych 1A, Psych Sociol 1 or Sociol 17 is recommended. This course views drug use behavior from a sociological and psychological perspective. It includes an analysis of factors contributing to drug use; social influences, subcultural influence, primary group influences (peer group,

the family), and personal psychodynamics and development. It encompasses illegal as well as legal drug use, particularly alcohol. Some emphasis will be given to potential solutions and preventive methods which could be of practical value to parents and various professional and semi-professional workers. (Same as Sociol 15)

**PSYCH 16 (3)  
THE PSYCHOLOGY OF  
INTERPERSONAL RELATIONSHIPS  
3 Hrs. Lec.**

An investigation of the dynamics of interpersonal relationships. Starting, developing, understanding, and improving one's relationships with others will be the focus of this course. Topics will include love, jealousy, meeting people, communications skills, self-disclosure, fair fighting techniques, sex roles, personal perception, and transactional analysis. Lecture-discussion-experiential.

**PSYCH 17 (3)  
SOCIAL PSYCHOLOGY  
3 Hrs. Lec.**

A study of the social and psychological aspects of how people interact and influence each other. The course will cover such topics not included in Psych 1A or Sociol 1 as: methods and ethics of research, influence, attitude changes, persuasion, and propaganda, aggression, cooperation and competition, conformity, prejudice, communication, affiliation, dynamics of group structure, including leadership and role playing. These topics are covered at both the theoretical and practical levels. (Same as Sociol 17)

**PSYCH 18 (1)  
RESEARCH IN PSYCHOLOGY  
1 Hr. Lec.**

Prerequisite: Psych 1A. An introduction to the scientific method of research used in psychology. The class will work together in surveying bibliographical sources, setting up a research paradigm, conducting a class experiment, analyzing and interpreting the psychological data.

**PSYCH 19 (3)  
THE PSYCHOLOGY OF LOSS  
3 Hrs. Lec.**

The grief process will be explored as well as how one can help a person resolve a personal loss, whether it be by divorce, death, separation, the aging process, illness, retirement, changing neighborhoods, or by loss of financial security. Why some forms of grief in ourselves and others go unresolved will be explained and discussed. In addition, techniques for giving emotional support and for creating life as a challenge rather

than a threat will be covered. Alternative models of caring for the terminally ill patient will be presented as well as concept of "conscious living-conscious dying." (Same as Geron 19)

**PSYCH 20 (3)  
DEVELOPMENTAL PSYCHOLOGY  
OF CHILDREN  
3 Hrs. Lec.**

(Same as ECE 20)

**PSYCH 21 (3)  
EARLY CHILDHOOD  
SOCIALIZATION: CHILDREN,  
FAMILY AND COMMUNITY  
3 Hrs. Lec.**

(Same as ECE 21)

**PSYCH 22 (3)  
PRINCIPLES OF CHILD  
DEVELOPMENT & OBSERVATION  
3 Hrs. Lec.**

(Same as ECE 22)

**PSYCH 26 (3)  
THE ART OF PARENTING  
3 Hrs. Lec.**

(Same as ECE 26)

**PSYCH 27 (3)  
UNDERSTANDING EXCEPTIONAL  
STUDENTS  
2 Hrs. Lec. 2 Hrs. Lab.**

(Same as ECE 27/PL 1)

**PSYCH 30 (3)  
PSYCHOLOGY OF ADOLESCENCE  
3 Hrs. Lec.**

Deals with the practical aspects of the development and growth of adolescence. Particular attention is given to the influences, settings, and problem areas of adolescence and youth.

**PSYCH 35 (3)  
DEVELOPMENTAL PSYCHOLOGY:  
CONCEPTION TO DEATH  
3 Hrs. Lec.**

Prerequisites: None (Psych 1A recommended). A study of the development of human beings from conception to death, covering prenatal development, infancy, toddlerhood, preschoolers, middle childhood, adolescence and adulthood including old age and death. The course will cover major theories of development, current research, and problem areas of human development.

**PSYCH 40 (3)  
PSYCHOLOGY OF CRISIS  
COUNSELING  
3 Hrs. Lec.**

Prerequisite: Psych 1A. A course designed to familiarize the student with a basic understanding of the causes, manifestations and treatment of emotional illness, especially relevant to crisis situations.

**PSYCH 46 (3)  
THE MENTALLY ILL, ALCOHOLIC,  
DRUG ADDICT AND THE LAW  
3 Hrs. Lec.**

Prerequisite: Psych 1A is recommended. An integrated approach to the understanding of laws governing the treatment of the emotionally disturbed individual, alcoholic, and drug addict as seen from the viewpoint of the professional, paraprofessional, law enforcement and the courts. (Same as Law Enf 46)

**RECREATION**

**REC 70 (3)  
INTRODUCTION TO LEISURE  
3 Hrs. Lec.**

Presents the basic ideas and problems in our contemporary society and projects this thinking into the future when greater amounts of leisure time will be at our disposal. The course shows the need of our citizenry to cope successfully with the pressures of our daily lives and have a balanced and meaningful use of leisure time in maintaining mental and physical health.

**REC 71 (3)  
SOCIAL RECREATION  
3 Hrs. Lec.**

A theory and activity course designed to present instruction, material, and information necessary to effectively conduct social recreation in clubs, playgrounds, recreation centers, churches and camps. Emphasis is on the social development and integration of individuals into group programs, including planning, programming and conducting social recreation activities.

**REC 72 (3)  
OUTDOOR RECREATION  
2 Hrs. Lec. 3 Hrs. Lab.**

History, development, principles and trends of organized camping, nature and conservation, and outdoor recreation. Laboratory and field trips, including camping and hiking activities. Practical skills in firecrafts, outdoor cooking and backpacking. Leadership training in camp counseling. Required for recreation majors. (Will not satisfy PE requirement.)

**REC 73 (4)  
RECREATION FOR SPECIAL GROUPS  
2 Hrs. Lec. 4 Hrs. Lab.**

Field work in therapeutic recreation in the community. The special groups emphasis area is dedicated to understanding and serving individuals and groups in our society who exhibit special recreational needs. Students must plan for two additional hours by arrangement.

**REC 74 (3)  
INTRODUCTION TO COMMUNITY  
RECREATION**

**3 Hrs. Lec.**

For recreation majors and non-majors, a general orientation to the field of recreation and parks, including a history of the development of the recreation profession, a survey of recreation and leisure services, description and interpretation of recreation as a form of community service and the nature and scope and significance of leisure and recreation as a social force in contemporary society. Emphasis is on the role of the professional leader in a variety of settings.

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**SOCIAL SCIENCE**

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**SOC SCI 52 (3)  
INTRODUCTION TO AMERICAN  
GOVERNMENT**

**3 Hrs. Lec.**

An introduction to the foundations and major characteristics of the governments of the United States and California, stressing the political habits of the American people within a historical setting. This course will meet the graduation requirement in American Institutions at Imperial Valley College, but is offered to students who do not intend to transfer to senior institutions. Not open to students with credit in Hist 17AB or Poly Sci 1, 2.

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**SOCIOLOGY**

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**SOCIOL 1 (3)  
PRINCIPLES OF SOCIOLOGY**

**3 Hrs. Lec.**

An introductory course to the field of sociology. A study of the characteristics of social life which emphasizes the processes of social interactions that are encountered in everyday living. A study of social structure, social patterns, and social institutions as they relate to life in the United States.

**SOCIOL 2 (3)  
CONTEMPORARY SOCIAL  
PROBLEMS**

**3 Hrs. Lec.**

This course deals with contemporary social problems and will cover those areas that are currently being defined by our society as problem issues. Emphasis will be given to understanding these problems on the societal level, the group level, and from the standpoint of the individual.

**SOCIOL 10 (3)  
SOCIOLOGY OF MINORITY GROUPS**

**3 Hrs. Lec.**

This course includes the study of the theories of prejudice and discrimination of different groups within American society. It will cover a historical analysis of the problems of these groups and typical areas will include racism, sexism, agism, and ethnic and religious discrimination.

**SOCIOL 15 (3)  
SOCIAL AND PSYCHOLOGICAL  
DYNAMICS OF DRUG USE**

**3 Hrs. Lec.**

(Same as Psych 15)

**SOCIOL 17 (3)  
SOCIAL PSYCHOLOGY**

**3 Hrs. Lec.**

(Same as Psych 17)

**SOCIOL 33 (3)  
MARRIAGE AND THE FAMILY**

**3 Hrs. Lec.**

An analysis of factors predictive of successful marital adjustment. Attention focused upon such family processes as courtship, marriage, reproduction, child rearing, and marital dissolution.

**SOCIOL 41 (3)  
MASS SOCIOLOGY AND  
COLLECTIVE BEHAVIOR**

**3 Hrs. Lec.**

This course will study the formation and evolution of groups and group behavior in varying social settings. The impact of participants, audience and outsiders will be used to examine the relationships of the individual to the group, groups to each other, and social movements and collective behavior. Problems of social control and change will be explored as they relate to group behavior, mass crowd behavior, social movements, and riots. (Same as Law Enf 41)

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**SPANISH**

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High school Spanish courses may be used to meet the prerequisites of advanced Spanish courses at IVC only if they include training in all four basic language skills: listening, speaking, reading and writing. The courses must have included phonetics, practice in both guided and free conversation as well as in reading aloud; testing in reading and listening comprehension; writing from dictation; and word-picture association. These high school courses will not count as college credit toward graduation. Placement will be made by examination and/or consent of the instructor. Contact the IVC Counseling Center for further information.

The last year course taken by a student in the high school language sequence may be repeated in college graduation credit, not to exceed units of repeated foreign language work. For advance placement, at least one course in Spanish must have been taken the year prior to entering college; otherwise, it is suggested that the student enroll in Span 1.

The above requirements may be waived by examination or by consent of the instructor.

**SPAN 1 (4)  
ELEMENTARY SPANISH**

**4 Hrs. Lec. 1 Hr. Lab.**

Prerequisites: The student must be able to speak and read English. Not open to students with native ability in Spanish. (See Span 20A) For additional oral practice, concurrent enrollment in Span 1 is recommended. The beginning Spanish course is based on a contrastive analysis between Spanish and English and is designed to develop in the English-speaking student rudimentary abilities in the four basic language skills: hearing, speaking, reading and writing. The main emphasis is on the pronunciation of both regular and irregular verbs. The student will be familiarized with those features of Hispanic culture which reflect the different frame of reference from which the native speaker of Spanish views the world around him.

**SPAN 1A (2)  
ELEMENTARY SPANISH**

**2 Hrs. Lec. ½ Hr. Lab.**

Prerequisite: The student must be able to speak and read English. This course is one-half the content of the regular Span 1 course. Completion of Span 1A and Span 1B sequence will be the equivalent of Span 1, and the total of 4 units.

**SPAN 1B (2)  
ELEMENTARY SPANISH**

**2 Hrs. Lec. ½ Hr. Lab.**

Prerequisite: Span 1A. The student must be able to speak and read English. For additional oral practice, concurrent enrollment in Span 5A is recommended. This course is one-half the content of the regular Span 1 course. Completion of Span 1A and 1B sequence will be the equivalent of Span 1, and the total of 4 units.

**SPAN 2 (4)  
ELEMENTARY SPANISH**

**4 Hrs. Lec. 1 Hr. Lab.**

Prerequisites: The student must be able to speak and read English. The student can be successful in Span 2 only after having achieved all of the minimal performance objectives specified for Span 1. Either a recent course in Span 1 or a recent 2 year high school Spanish



course with good retention should enable the student to succeed in Span 2. For additional oral practice, concurrent enrollment in Span 5B is recommended. A continuation of Span 1 with the main emphasis on the imperfect, preterit, present perfect and present subjunctive forms for both regular and irregular verbs.

**SPAN 2A (2)  
ELEMENTARY SPANISH**  
2 Hrs. Lec. ½ Hr. Lab.

Prerequisite: The student must be able to speak and read English. The student can be successful in Span 2A only after having achieved all the minimal performance objectives specified for Span 1A. A recent course in Span 1, 1B or a recent 2 year high school Spanish course with good retention should enable the student to succeed in Span 2A. This course is one-half the content of the regular Span 2 course. Completion of the Span 2A and 2B sequence is the equivalent of Span 2 for a total of 4 units. A continuation of Span 1 or Span 1B.

**SPAN 2B (2)  
ELEMENTARY SPANISH**  
2 Hrs. Lec. ½ Hr. Lab.

Prerequisites: The student must be able to speak and read English. For additional oral practice, concurrent enrollment in Span 5B is recommended. The student can be successful in Span 2B only after having achieved the minimal performance objectives specified for Span 2A. This course is one-half the content of Span 2. Completion of the Span 2A and 2B sequence is the equivalent of Span 2. This course is a continuation of Span 2A.

**SPAN 3 (4)  
INTERMEDIATE SPANISH**  
4 Hrs. Lec. 1 Hr. Lab.

Prerequisites: The student must be able to speak and read English. The student can be successful in Span 3 only after having achieved all of the minimal performance objectives specified for both Span 1 and Span 2. Either a recent course in Span 2 or a recent 3 year high school Spanish course with good retention should enable the student to succeed in Span 3. A continuation of Span 2 covering the uses of all Spanish tenses with special emphasis on the subjunctive and imperative modes.

**SPAN 4 (4)  
INTERMEDIATE SPANISH**  
4 Hrs. Lec. 1 Hr. Lab.

Prerequisites: The student must be able to speak and read English. The student can be successful in Span 4 only after having achieved all the minimal performance objectives specified for Span 1, 2 and 3. A recent course in Span 3 or the recent completion of 4 years of high

school Spanish with good retention should enable the student to succeed in Span 4. A continuation of Span 3 but with greater emphasis on the reading and writing skills. The student will work with all tenses and modes of the Spanish language.

**SPAN 5A (2)  
BEGINNING CONVERSATIONAL  
SPANISH & CULTURE**  
2 Hrs. Lec. 1 Hr. Lab.

A course designed to give the student a basic ability in everyday Spanish. The course will emphasize vocabulary-building, conversational skills, listening and comprehension and culture.

**SPAN 5B (2)  
BEGINNING CONVERSATIONAL  
SPANISH & CULTURE**  
2 Hrs. Lec. 1 Hr. Lab.

Prerequisite: Span 5A or by examination. Concurrent enrollment in Span 2 is recommended. A continuation of Span 5A.

**SPAN 7 (3)  
THE SPANISH SOUND SYSTEM**  
3 Hrs. Lec.

Span 7 emphasizes the sounds of Spanish and of the Spanish phonemic system with special attention to the problems involved in the hearing of Spanish sounds, as well as their articulation.

**SPAN 10 (3)  
INTERMEDIATE CONVERSATIONAL  
SPANISH**  
3 Hrs. Lec.

Prerequisites: Span 1 and 2 or by examination. Conversational skills are developed through oral-aural drills, lab work and guided conversation based on selected readings. Not open to students with bilingual or native ability. Student must plan for an additional hour of individual language laboratory by arrangement.

**SPAN 11 (3)  
ADVANCED CONVERSATIONAL  
SPANISH**  
3 Hrs. Lec.

Prerequisite: Span 3 or 10. Continuation of Span 10.

**SPAN 19 (3)  
BUSINESS CORRESPONDENCE IN  
SPANISH**  
3 Hrs. Lec.

Recommended for bilingual students with Business 42 or equivalent. Practice in letter form and style, business vocabulary, spelling, and punctuation. Emphasis on differences and similarities in English and Spanish business correspondence. (Same as Bus 43)

**SPAN 20A (4)  
BILINGUAL SPANISH**  
4 Hrs. Lec. 1 Hr. Lab.

Prerequisites: Spanish speaking fluency, native or near native or 3 years of high school Spanish. The course is designed to develop in the student the four basic language skills of listening, speaking, reading and writing with a constant comparison between Spanish and English usage. Emphasis will be on the indicative tenses: present, preterit, imperfect and future. These skills will be explored through readings in the contemporary culture of Spain, Latin America and the Spanish speaking communities in the United States - Mexican, Cuban, Puerto Rican and Sephardic.

**SPAN 20B (4)  
BILINGUAL SPANISH**  
4 Hrs. Lec. 1 Hr. Lab.

Prerequisites: Span 20A or four years of high school Spanish. Continuation of Span 20A. Emphasis on the conditional and the subjunctive forms.

**SPAN 21 (4)  
INTERMEDIATE BILINGUAL SPANISH**  
4 Hrs. Lec. 1 Hr. Lab.

Prerequisites: Span 20B or four years of high school Spanish. Designed to develop in the bilingual student, language proficiency, with special attention to the usage of the various styles - formal, regional and colloquial. Emphasis on writing skills, punctuation and grammar review.

**SPAN 22 (4)  
ADVANCED BILINGUAL SPANISH**  
4 Hrs. Lec. 1 Hr. Lab.

Prerequisites: Span 21 or four years of high school Spanish. Continuation of Span 21. Emphasis will be placed upon advanced grammar review of the conditional and the subjunctive forms, vocabulary building, translating, oral and written composition.

**SPAN 23 (3)  
BILINGUAL ORAL SPANISH**  
3 Hrs. Lec.

Prerequisites: Span 20A and 20B or three years of high school Spanish. An intensive course in oral Spanish for students who have learned Spanish as a native language. It is intended for students who may read well and have good grammar but need more practice in oral structures. This course will include a brief grammar review and discussion of relevant everyday topics of social concern. Concurrent enrollment in Span 20B is recommended.

**SPAN 24 (3)  
INTRODUCTION TO SPANISH  
LITERATURE**  
3 Hrs. Lec.

Prerequisites: Span 22 or 4 years of high school Spanish or equivalent. Introduc-

tory survey of representative movements, authors and works of Spanish literature from the Middle Ages to the present. Concurrent enrollment in Span 40/Hist 40 is recommended. Course conducted in Spanish.

**SPAN 25 (3)**  
**INTRODUCTION TO SPANISH AMERICAN LITERATURE**  
**3 Hrs. Lec.**

Prerequisites: Span 22 or 4 years of high school Spanish or equivalent. Introductory survey of representative movements, authors and works of Spanish American literature from the Spanish Discovery to the present. Concurrent enrollment in Span 41 is recommended. Course conducted in Spanish.

**SPAN 26 (3)**  
**INTRODUCTION TO TRANSLATION AND INTERPRETATION**  
**2 Hrs. Lec. 2 Hrs. Lab.**

Prerequisite: Near native fluency in Spanish and English. This course is designed to give students an introduction to theory and practice in translating and interpreting. There will be intensive vocabulary building and ear training exercises; extensive and intensive reading on current events; cross cultural training and research on career possibilities in these areas.

**SPAN 28A (3)**  
**THE MEXICAN AMERICAN IN LITERATURE**  
**3 Hrs. Lec.**  
(Same as Eng 46A)

**SPAN 28B (3)**  
**THE MEXICAN AMERICAN IN LITERATURE**  
**3 Hrs. Lec.**  
(Same as Eng 46B)

**SPAN 40 (3)**  
**CIVILIZATION OF SPAIN AND PORTUGAL**  
**3 Hrs. Lec.**

A survey course on the civilization of Spain and Portugal. Topics include: geography, history, art history and appreciation, sociology, psychology, music, foods, folklore, religion, current events. These will provide a panoramic view of the way of life of the Spanish and Portuguese people and will help the student understand two cultures that have influenced millions of people throughout the world. Illustrated lectures. From prehistory to the 20th Century. Course conducted in English. (Same as Hist 40)

**SPAN 41 (3)**  
**CIVILIZATION OF SPANISH AMERICA AND BRAZIL**  
**3 Hrs. Lec.**

An interdisciplinary survey of the history, culture, traditions and artistic contributions of the indigenous European

and African heritage of Spanish America and Brazil. From prehispanic times to the present. Course conducted in English. (Same as Hist 41)

**SPAN 42 (3)**  
**INTRODUCTION TO MEXICAN AMERICAN STUDIES**  
**3 Hrs. Lec.**

An interdisciplinary survey of the historical role, culture, values and artistic contributions of the Mexican Americans to the United States. From 1836 to the present. Course conducted in English.

**SPAN 43 (3)**  
**HISTORY AND CULTURE OF THE PHILIPPINES**  
**3 Hrs. Lec.**

A survey of the history, culture, traditions and artistic contributions of the Filipinos. Special emphasis on the economic, social and historical background from the prehispanic period to the present.

**SPAN 54A (2)**  
**BEGINNING CONVERSATIONAL SPANISH FOR CAREERS**  
**2 Hrs. Lec. 1 Hr. Lab.**

A course designed to give the beginning student of Spanish a basic vocabulary, conversational skills, listening comprehension and basic grammatical generalizations to be used in the student's career field. Possible career subtitles include, but are not limited to, Medical, Business, Law Enforcement, School Personnel. These subtitles will be listed in the schedule of classes. Students must plan for an additional hour of individual language laboratory by arrangement.

**SPAN 54B (2)**  
**BEGINNING CONVERSATIONAL SPANISH FOR CAREERS**  
**2 Hrs. Lec. 1 Hr. Lab.**

Prerequisites: Span 54A or equivalent. Second of two courses offering basic Spanish oriented toward a specific career. The course features extensive oral drills and role playing in career situations. Students must plan for an additional hour of individual language laboratory by arrangement.

**SPAN 60AC (1-1-1)**  
**LANGUAGE LABORATORY**  
**2 Hrs. Lab.**

Prerequisite: Current enrollment in ESL, French or Spanish language course. Individualized language laboratory. Practice in listening comprehension and pronunciation. Supplementary course for beginning and intermediate levels in ESL, French and Spanish. Thirty-six hours of assigned lab work. (Same as Eng 60AC and Fr 60AC)

## SPECIAL STUDIES

**SPECIAL STUDIES 51 or 81 (1-3)**  
**VOCATIONAL EDUCATION**  
Hours by arrangement

**SPECIAL STUDIES 52 or 82 (1-3)**  
**HUMANITIES**  
Hours by arrangement

**SPECIAL STUDIES 53 or 83 (1-3)**  
**ENGLISH**  
Hours by arrangement

**SPECIAL STUDIES 54 or 84 (1-3)**  
**NATURAL SCIENCE**  
Hours by arrangement

**SPECIAL STUDIES 55 or 85 (1-3)**  
**SOCIAL SCIENCE**  
Hours by arrangement

**SPECIAL STUDIES 56 or 86 (1-3)**  
**BUSINESS**  
Hours by arrangement

**SPECIAL STUDIES 57 or 87 (1-3)**  
**HEALTH, PHYSICAL EDUCATION AND RECREATION**  
Hours by arrangement

**SPECIAL STUDIES 58 or 88 (1-3)**  
**BEHAVIORAL SCIENCE**  
Hours by arrangement

**SPECIAL STUDIES 51-88**  
**COURSE DESCRIPTION**  
Course content, prerequisites, and credit to be determined by the Division and the Office of Instruction in relation to community-student interest available staff. Not offered every semester. Courses numbered 81-88 are transferable.

## SPEECH

**SP 1 (3)**  
**ORAL COMMUNICATION**  
**3 Hrs. Lec.**  
Training in the fundamental process involved in oral communication, emphasis on organizing material, outlining, constructing, and delivering various forms of speeches.

**SP 2AB (3-3)**  
**INTERMEDIATE PUBLIC SPEAKING**  
**3 Hrs. Lec.**  
Prerequisite: Sp 1. A continuation of Sp 1 with particular emphasis on organization and delivery, and study in the use of parliamentary procedure, debate, discussion, and oral reading.

**SP 10 (3)**  
**ARGUMENTATION AND DEBATE**  
**3 Hrs. Lec.**  
Prerequisite: Sp 1, taken previously concurrently. An introduction to the problems of evidence and inference with emphasis on the application of logic to rational discussion of problems.

**SP 11 (3)**  
**ORAL INTERPRETATION —**  
**READERS THEATRE**

**3 Hrs. Lec.**

Discovering and imparting, vocally, intelligent and emotional meanings of the printed page.

**SP 12ABCD (1-1-1-1)**  
**FORENSICS**

**1 Hr. Lec.**

Prerequisites: Eligibility for Eng 1A and permission of the instructor. Sp 1 and 2 recommended. Enrollment contingent upon participation in forensic or competitive speech activities as a member of the IVC Speech Team. Student must be prepared to meet the following: 1) be present for at least 15 regular sessions with instructor during the semester (by arrangement with instructor); 2) be prepared to attend at least two forensic meets during the semester.

**SP 30 (3)**  
**VOICE AND ARTICULATION**  
**DEVELOPMENT**

**3 Hrs. Lec.**

Satisfies the requirement of voice and diction for pathology majors. It is recommended for those planning careers in elementary education, special education, early childhood education and bilingual education majors. Enables the student to develop a pleasant voice and manner of expression. The various problems of voice and diction are presented, including the physiology of voice production and phonetics. Drills for the improvement of the student's voice are presented. Recommended for bilingual students to improve their articulation and English language usage.

**TEACHER AIDE**

**TA 1 (3)**  
**INTRODUCTION TO**  
**INSTRUCTIONAL ASSOCIATE**  
**3 Hrs. Lec.**

Introductory course for students interested in a career as an Instructional Associate. Brief overview of philosophies, ideals, goals, directions, problems, and issues in public education today. Organization of school systems; legal aspects of teaching, career opportunities; credentialing and degree-certificate requirements. Defines terminology, clerical and mechanical skills, role in the classroom; review duties and responsibilities, and relationships with students and school personnel. For students planning to become Instructional Associates in elementary school.

**TA 3 (3)**  
**PSYCHOLOGY OF PERSONAL AND**  
**SOCIAL ADJUSTMENT**

**3 Hrs. Lec.**

(Same as Psych 3)

**TA 4 (3)**  
**BILINGUAL-MULTICULTURAL**  
**CURRICULUM AND INSTRUCTION**

**3 Hrs. Lec.**

Prerequisite: TA 1 preferred. A history of the development of goals and philosophy of Bilingual-Multicultural Education. A study of various implemented programs and the role of the instructional aide in a bilingual-multicultural classroom. Also includes the techniques of teaching both Spanish and English as a second language. Includes the development and use of bilingual-multicultural materials in various subject areas and the methods of teaching all subject areas in the bilingual-multicultural classroom. (Same as ECE 4)

**TA 6 (3)**  
**LANGUAGE DEVELOPMENT FOR**  
**YOUNG CHILDREN**

**3 Hrs. Lec.**

Introduction to basic language art skills of listening, speaking, reading, and writing. Experiences in use of children's literature, reading methods, and reading games. An emphasis on learning environments which are conducive to oral language development, puppetry, drama, and poetry. Students will learn to develop learning centers related to language development. (Same as ECE 6)

**TA 8 (3)**  
**MATHEMATICS FOR YOUNG**  
**CHILDREN**

**3 Hrs. Lec.**

Prerequisite: TA 1. An understanding of how mathematics and number concepts develop in children. An experimental approach to mathematics through math applied in the real world. Aspects of Montessori materials and math games in teaching math. Understanding of elementary concepts of the real number system, numeration systems, mathematical sets, philosophy of modern mathematics. Emphasis on providing most effective techniques for instruction of young children. (Same as ECE 8)

**TA 9 (3)**  
**FIELD EXPERIENCE**

**1 Hr. Lec. 10 Hrs. Lab.**

Supervised field work with young children. Provides practical opportunities to apply knowledge, methods, and skills in a school setting. Seminars cover experiences, discussion of common problems, exchange of ideas, techniques and materials. Students may do their student teaching at the school where they are employed.

**TA 24 (3)**  
**CREATIVE LEARNING EXPERIENCES**  
**FOR YOUNG CHILDREN**

**3 Hrs. Lec.**

(Same as ECE 24, Psych 24)

**WATER TREATMENT TECHNOLOGY**

**WT 1 (4)**  
**WATER TREATMENT PLANT**  
**OPERATOR I**

**3 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: Math 51 or satisfactory score on math placement test. This course will provide information needed to operate a basic fresh-water treatment plant as efficiently as possible. Course will consist of start-up operation, daily operation, interpretation of laboratory results, and possible approaches to solving operational problems.

**WT 2 (4)**  
**WATER TREATMENT PLANT**  
**OPERATOR II**

**3 Hrs. Lec. 3 Hrs. Lab.**

Prerequisite: WT 1. Study of fresh-water maintenance, safety, sampling, laboratory procedures, hydraulics, records, analysis and presentation.

**WT 5 (3)**  
**WATER-BORNE DISEASES**

**3 Hrs. Lec.**

This course is designed to give water and waste water treatment plant operators a general knowledge of the procedures and factors involved in the prevention and control of water-borne diseases. The subjects covered are: Water-borne Diseases; Water Sources and Impurities; Standards; Elementary Biology and Microbiology; Basic Hydraulics and Hydrostatics; Treatment; Cross Connections; Sampling; Bacteriological Tests Commonly Used in Water Sanitation.

**WT 6 (3)**  
**COMPUTATIONAL PROCEDURES**  
**FOR TREATMENT PLANT**  
**OPERATOR I**

**3 Hrs. Lec.**

This course is designed to give water and waste water treatment operators a general knowledge of basic mathematics as applied to treatment plant operations. The subjects covered are: calculation of treatment plant problems; fractions; decimals; percentages; ratio; proportions; averages; areas; volumes; metric system conversions; and estimation.

**WT 9 (4)**  
**WASTE WATER TREATMENT I**

**4 Hrs. Lec.**

Prerequisite: WT 6. This course is designed to train operators in the effective operation of wastewater treatment plants. Course will consist of the fundamentals of wastewater treatment, start-up operation, daily operation, interpretation of laboratory results, and process control.

**WT 10 (4)**  
**WASTE WATER TREATMENT II**  
**4 Hrs. Lec.**

Prerequisite: WT 9. Course will consist of wastewater maintenance, plant safety, sampling, laboratory procedures, hydraulics, records, process control - activated sludge, sludge digestion, solids handling, and possible approaches to solving operational problems.

**WT 11 (4)**  
**WASTE WATER TREATMENT III**  
**4 Hrs. Lec.**

Prerequisite: WT 10. Course consists of odor control measures, operational control alternatives, in-depth study of solids handling and disposal, wastewater reclamation, instrumentation, industrial waste treatment and monitoring.

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**WELDING TECHNOLOGY**

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**WELD 31 (5)**  
**BASIC WELDING**  
**3 Hrs. Lec. 6 Hrs. Lab.**

A complete basic study of welding technology. The student practices techniques for skill development in shielded metal arc welding, gas tungsten arc welding, and oxy-acetylene welding processes.

**WELD 32 (3)**  
**OXY-ACETYLENE WELDING**  
**2 Hrs. Lec. 3 Hrs. Lab.**

Theory, practice and application of joining metals by the oxy-acetylene process. Includes metal cladding, cutting and bronze welding.

**WELD 34 (3)**  
**INERT GAS SHIELDED ARC WELDING**  
**2 Hrs. Lec. 3 Hrs. Lab.**

Theory, practice and application of Tungsten-Inert-Gas processes on aluminum, stainless steel, mild steel, and other exotic metals.

**WELD 36A (5)**  
**ADVANCED WELDING**  
**3 Hrs. Lec. 6 Hrs. Lab.**

Prerequisite: Weld 31 or permission of instructor. A concentrated course in shielded metal arc welding. The student develops his/her welding skill to a professional entry level. Includes a review of oxy-acetylene cutting and safety.

**WELD 36B (5)**  
**ADVANCED WELDING**  
**3 Hrs. Lec. 6 Hrs. Lab.**

Prerequisite: Weld 36A or permission of instructor. Emphasis is on skill development for shielded metal arc welding of

pipe and heavy structural plate. Gas metal arc welding process is included to further enhance the welder's abilities. Advanced processes for shielded metal arc welding, gas metal arc welding and oxy-acetylene welding are presented in all phases of the class.

**WELD 36C (5)**  
**ADVANCED WELDING - WELDER CERTIFICATION AND BLUEPRINT READING**

**3 Hrs. Lec. 6 Hrs. Lab.**

Prerequisite: Completion of Weld 36B or permission of instructor. Emphasis is on welding operator qualification testing. This course is for the experienced welder and for the student completing the final phase of the Welding Technology Program. A detailed study of blueprint reading is included to further develop the welder's abilities.

**WELD 38 (3)**  
**SHEET METAL FUNDAMENTALS**  
**2 Hrs. Lec. 3 Hrs. Lab.**

Theory and practice in the fundamentals of planning, layout, pattern development and fabrication of flat sheet metal into useful products.

**WELD 50 (3)**  
**SHOP MATHEMATICS**  
**3 Hrs. Lec.**

(Same as Ag 50, Auto Tech 50, Math 50 and PL 50)

**WELD 75 (3)**  
**INTRODUCTION TO INDUSTRIAL/AUTOMOTIVE SKILLS**  
**3 Hrs. Lec.**

(Same as Auto Tech 75/Ag 75)

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**COOPERATIVE WORK EXPERIENCE**

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Cooperative Work Experience Education is a cooperative educational program by Imperial Valley Community College and the community employers. It is an approved program of activities and objectives which is evaluated by the college. The college provides the organization, the class facilities and the personnel to coordinate the program. The employers provide places to work (work stations) and on-the-job training which has educational value for the students. Sixteen units of work experience education may be allowed toward graduation with the Associate Degree. All students are required to be entered in a certificate or degree program. General work experience courses are not approved for veteran's benefits.

**WE GEN 70 (3)**  
**PERSONAL EFFICIENCY**  
**1 Hr. Lec. 10 Hrs. Lab.**

Emphasis is placed on the capacity and efficiency of accomplishing designated tasks, securing an appropriate position and increasing efficiency with work progress. Laboratory work will be arranged with the employer. The work may be in any occupation but must have educational value for the student.

**WE GEN 71 (3)**  
**MOTIVATION**  
**1 Hr. Lec. 10 Hrs. Lab.**

Motivation is studied from the employee and employers perspective. Personal leadership development and improvement is emphasized. Laboratory work will be arranged with the employer. The work may be in any occupation but must have educational value for the student.

**WE GEN 72 (3)**  
**LABOR AND THE ECONOMY**  
**1 Hr. Lec. 10 Hrs. Lab.**

Labor and management relationships are discussed. The effect of government on labor and the economy is emphasized. Employee procurement, collective bargaining and the labor movement is part of the instruction. Laboratory work will be arranged with the employer. The work may be in any occupation but must have educational value for the student.

**WE GEN 73 (3)**  
**LAWS AFFECTING EMPLOYEES**  
**1 Hr. Lec. 10 Hrs. Lab.**

Labor laws that affect the welfare and security of employees are emphasized. Industrial welfare, unemployment insurance, workman's compensation, social security and taxes are among laws discussed. Laboratory work will be arranged with the employer. The work may be in any occupation but must have educational value for the student.

**WE OCC 80 (4)**  
**PERSONAL EFFICIENCY**  
**1 Hr. Lec. 15 Hrs. Lab.**

Emphasis is placed on the capacity and efficiency of accomplishing designated tasks, securing an appropriate position and increasing efficiency with work progress. Laboratory work will be arranged with employer. The work must be in the field of the student's planned course or occupational training.

**WE OCC 81 (4)****MOTIVATION****1 Hr. Lec. 15 Hrs. Lab.**

Motivation is studied from the employee's and employer's perspective. Personal leadership development and improvement is emphasized. Laboratory work will be arranged with the employer. The work must be in the field of the student's planned course of occupational training.

**WE OCC 82 (4)****LABOR AND THE ECONOMY****1 Hr. Lec. 15 Hrs. Lab.**

Labor and management relationships are discussed. The effect of government on labor and the economy is emphasized. Employee procurement, collective bargaining and the labor movement is part of the instruction. Laboratory work will be arranged with the employer. The work must be in the field of the student's planned course of occupational training.

**WE OCC 83 (4)****LAWS AFFECTING EMPLOYEES****1 Hr. Lec. 15 Hrs. Lab.**

Labor laws that affect the welfare and security of employees are emphasized. Industrial welfare, unemployment insurance, workman's compensation, social security and taxes are among laws discussed. Laboratory work will be arranged with the employer. The work must be in the field of the student's planned course of occupational training.

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**ZOOLOGY**


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**ZOOL 1A (4)****GENERAL ZOOLOGY****2 Hrs. Lec. 6 Hrs. Lab.**

Prerequisite: Any year course in a high school laboratory science or the equivalent. Introduction to basic principles of animal biology with reference to structure, functions, classification, heredity, and the environment of animals in general and of invertebrates in particular.

**ZOOL 1B (4)****GENERAL ZOOLOGY****2 Hrs. Lec. 6 Hrs. Lab.**

Prerequisite: Zool 1A. Continuation of Zool 1A with emphasis upon comparative anatomy and physiology, development of vertebrate forms and their interrelationships.

**ZOOL 10 (3)****LIFE OF THE PAST: AN INTRODUCTION TO PALEONTOLOGY****3 Hrs. Lec.**

(Same as Geol 10)

# MAJORS

Generally, 18 units of specified course work will satisfy the requirement for the major. However, some majors will require more than 18 units. Please note the specified number of required units at the beginning of each major description.

The following definitions apply to the major descriptions shown in this catalog:

1. Required courses are the specific courses which must be taken to fulfill the requirements in an area of study.
2. Acceptable courses are those from which the student may select in order to meet the total units requirement. The total number of units from the required course list, plus the number of units selected by the student from the acceptable course list must equal at least the total unit count required for the major.
3. Courses recommended as electives are beyond the major's requirement. These courses are suggested only, and selection from this list depends upon the student's individual desire and the total number of electives available within his own program.

Students may satisfy the major requirements in the following fields of study:

## AGRICULTURAL BUSINESS

Twenty-four units required for the major

### I. Required courses for the major

Ag 14	Entomology	(3)
Ag 25	Agricultural Bus. Management	(3)
Ag 27	Agriculture Sales and Service Management	(3)
Ag 40	Soils	(3)
Ag 41	Fertilizers	(3)
Ag 49	Weeds and Weed Control	(3)

### II. Acceptable courses for the major (6 units from the following courses)

Ag 26	Agricultural Business Organization and Management	(3)
Ag 45	Vegetable Production	(3)
Bus 4	Principles of Marketing	(3)
Bus 5A	Business Law	(3)
Bus 10A	Practical Bookkeeping	(3)
Bus 23	Office Machines	(3)
WE Occ 80	Personal Efficiency	(4)
WE Occ 81	Motivation	(4)
WE Occ 82	Labor and the Economy	(4)
WE Occ 83	Laws Affecting Employees	(4)

## AGRICULTURAL CHEMICAL TECHNOLOGY

Twenty-two units required for the major

### I. Required courses for the major

Ag 14	Entomology	(3)
Ag 28	Heavy Equipment Operation and Maintenance	(5)
Ag 40	Soils	(3)
Ag 41	Fertilizers	(3)
Ag 49	Weeds and Weed Control	(3)

### II. Acceptable courses for the major (5 units from the following courses)

Ag 32	Irrigation and Drainage	
Ag 33A	Farm Power	
Ag 37	Small Gasoline Engines	
Ag 45	Vegetable Production	
Ag 65	Control of Insects & Other Pests	
Bot 1A	General Botany	
Chem 2A	Introduction to Chemistry	
Eng 55	Technical and Report Writing	
WE Occ 80	Personal Efficiency	
WE Occ 81	Motivation	
WE Occ 82	Labor and the Economy	
WE Occ 83	Laws Affecting Employees	
Weld 31	Basic Welding	

## AGRICULTURAL MECHANICS

Twenty-two units required for the major

### I. Required courses for the major

Ag 28	Heavy Equipment Operation and Maintenance	
Ag 33A	Farm Power	
Weld 31	Basic Welding	

### II. Acceptable courses for the major (6 units from the following courses)

Ag 33B	Farm Power	
Ag 35	Fluid Power	
Ag 36	Agricultural Construction	
Ag 37	Small Gasoline Engines	
Ag 38	Electricity on the Farm	
Ag 50	Shop Mathematics	
WE Occ 80	Personal Efficiency	
WE Occ 81	Motivation	
WE Occ 82	Labor and the Economy	
WE Occ 83	Laws Affecting Employees	

## ANIMAL SCIENCE

Twenty-two units required for the major

### I. Required courses for the major

Ag 20	Animal Science	
Ag 21	Feeds and Feeding	
Ag 22	Livestock Selection	
Ag 23	Animal Diseases	
Ag 24	Horse Husbandry	

### II. Acceptable courses for the major (7 units from the following courses)

Ag 14	Entomology	
Ag 28	Heavy Equipment Operation and Maintenance	
Ag 33A	Farm Power	
Ag 42	Plant Science & Forage Crops	
Ag 64	Horsemanship-Equitation	
Ag 66	Intermediate Horsemanship-Equitation	
Chem 2A	Introduction to Chemistry	
WE Occ 80	Personal Efficiency	
WE Occ 81	Motivation	
WE Occ 82	Labor and the Economy	
WE Occ 83	Laws Affecting Employees	
Weld 31	Basic Welding	

**ANTHROPOLOGY**

Twenty-seven units required for the major

I. Required courses for the major

Anthro 1	Physical Anthropology	(3)
Anthro 2	Cultural Anthropology	(3)
Anthro 3A	Intro. to Arch. Site Surveying	(3)
Anthro 3B	Intro. to Arch. Excavations	(3)
Anthro 4	California Indians	(3)
Geog 1	Physical Geography	(3)

II. Acceptable courses for the major (minimum of 9 units required from the following courses)

Anthro 3C	Advanced Arch. Survey	(3)
Anthro 3D	Advanced Arch. Excavations	(3)
Anthro 5	Archaeology: Theory, Prehistory and Laboratory	(3)
Anthro 6	Indians of North America	(3)
Anthro 7	Classic Civilizations of Pre-Historic Meso America	(3)
Anthro 8	Indians of the Southwest	(3)

**ART**

Twenty-four units required for the major

I. Required courses for the major

Art 22A	Design	(3)
Art 22B	Design	(3)
*Art 20A	Drawing	(3)

(Minimum of 6 units from the following courses)

Art 3A	History & Appreciation of Art	(3)
Art 3B	History & Appreciation of Art	(3)
Art 4	History & Appreciation of Modern Art	(3)

II. Acceptable courses for the major (9 units from the following areas). These are suggested "clusters" of courses. Students may also take courses from any of the suggested groups.

**Painting**

Art 18A	Watercolor Painting	(3)
Art 18B	Watercolor Painting	(3)
Art 20B	Drawing	(3)
Art 21A	Painting	(3)
Art 21B	Painting	(3)
Art 25A	Life Drawing	(3)
Art 25B	Life Drawing	(3)

**Ceramics**

Art 23A	Ceramics	(3)
Art 23B	Ceramics	(3)
Art 23C	Ceramics	(3)
Art 24AB	Ceramic Sculpture	(3-3)
Art 28	Technical Ceramics	(3)

**Crafts**

Art 27	Creative Handweaving	(3)
Art 29A	Jewelry	(3)
Art 29B	Jewelry	(3)
Art 23A	Ceramics	(3)
Art 26	Design in Crafts	(3)
Art 31	Crafts	(3)
Art 32	Introduction to Stained Glass	(3)

\*Should be taken first semester if possible to allow for sequence of Art 20B, Art 21AB, and Art 25AB.

**AUTOMOTIVE BODY REPAIR AND PAINTING**

Twenty-four to 27 units required for the major

I. Required courses for the major

Auto Body 70	Auto Body Repairing & Painting	(5)
Auto Body 71	Advanced Auto Body Repairing and Painting	(5)
Auto Body 72	Auto and Light Truck Major Collision Repairing	(5)
Auto Tech 50	Shop Mathematics (if required)	(3)
Auto Tech 53	Brakes and Suspension	(3)
Weld 31	Basic Welding	(5)

II. Acceptable courses for the major (five units from the following list may be accepted as major credit if the equivalent of Auto Body 70 has been completed in high school (two years of high school auto body).

Auto Tech 51	Engine Technology, or equivalent	(5)
Auto Tech 54	Electrical and Fuel Systems	(3)
Auto Tech 58	Automotive Air-Conditioning	(3)
WE	Cooperative Work Experience	(4)

**AUTOMOTIVE TECHNOLOGY**

Twenty-eight to 31 units required for the major

I. Required courses for the major

Auto Tech 50	Shop Mathematics (if required)	(3)
Auto Tech 51	Engine Technology, or equivalent	(5)
Auto Tech 52	Manual Transmissions and Power Trains	(3)
Auto Tech 53	Brakes and Suspension	(3)
Auto Tech 54	Carburetors, Fuel and Exhaust Systems	(3)
Auto Tech 55	Advanced Gasoline Engines	(5)
Auto Tech 60	Electrical, Starting, Charging, Ignitions & Related Electrical Systems	(3)

II. Acceptable courses for the major

Auto Tech 56	Diagnostics	(3)
Auto Tech 57	Fluid Power	(4)
Auto Tech 58	Automotive Air-Conditioning	(3)
Auto Tech 59	Small Gasoline Engines	(3)
Auto Tech 61	Automatic Transmissions	(5)
Auto Tech 63	Diesel Engine Fundamentals	(5)
Auto Tech 65	Basic Machine Shop Technology	(3)
Weld 31	Basic Welding	(5)

**BANKING—ADMINISTRATIVE SERVICES**

Twenty-three units required for the major

I. Required courses for the major

Bus 1A	Principles of Accounting	(4)
Bus 1B	Principles of Accounting	(4)
Bus 6	Management Concepts of Supervision	(3)
Bus 7	Human Relations in Management	(3)
Bus 60	Principles of Bank Operations	(3)

II. Acceptable courses for the major (select a minimum of 6 units)

Bus 5A	Business Law	..... (3)
Bus 42	Business Correspondence	..... (3)
Econ 1	Principles of Economics	..... (3)
Sp 1	Oral Communications	..... (3)

**BANKING—CREDIT ADMINISTRATION**

Twenty-three units required for the major

I. Required courses for the major

Bus 1A	Principles of Accounting	..... (4)
Bus 1B	Principles of Accounting	..... (4)
Bus 60	Principles of Bank Operations	..... (3)
Bus 61	Analysis of Financial Statements	..... (3)
Bus 62	Installment Credit	..... (3)

II. Acceptable courses for the major (select a minimum of 6 units)

Bus 5A	Business Law	..... (3)
Bus 7	Human Relations in Management	.. (3)
Bus 42	Business Correspondence	..... (3)
Bus 63	Financing Business Enterprises	..... (3)
Bus 64	Agricultural Finance	..... (3)
Econ 1A	Principles of Economics	..... (3)
Sp 1	Oral Communication	..... (3)

**BANKING—SECRETARIAL**

Twenty-two to 28 units required for the major

I. Required courses for the major

Bus 5A	Business Law	..... (3)
Bus 21AB	Proficiency-Exit Typing*	..... (2-2)
Bus 32AB	Dictation & Transcription Lab**	..... (3-3)
Bus 40 OR	Grammar and Usage	] (2 or 3)
Bus 41 OR	Essentials of Business Correspondence	
Bus 42	Business Correspondence	..... (2 or 3)
Bus 60	Principles of Bank Operations	..... (3)

II. Acceptable courses for the major (6 units from the following courses)

Sp 1	Oral Communication	..... (3)
Bus 7	Human Relations in Management	.. (3)
Bus 23	Office Machines	..... (3)
Bus 39	Office Procedures	..... (3)
Bus 50	Introduction to Data Processing	... (3)

\*Minimum skill level of 60 net words per minute required to qualify for major. If skill level attained in Bus 21A, student is excused from Bus 21B.

\*\*Minimum skill level of 90 words per minute required to qualify for major. If attained in Bus 32A, student is excused from Bus 32B.

**\*\*\*BANKING—GENERAL OPERATIONS**

Twenty-two to 25 units required for the major

I. Required courses for the major

Bus 5A	Business Law	..... (3)
Bus 10A	Practical Bookkeeping**	..... (3)
Bus 21AB	Proficiency-Exit Typing*	..... (2-2)
Bus 23	Office Machines	..... (3)
Bus 40	Grammar and Usage	..... (3)
Bus 60	Principles of Bank Operations	..... (3)

II. Acceptable courses for the major (select any two courses)

Sp 1	Oral Communication	..... (3)
Bus 7	Human Relations in Management	.. (3)
Bus 39	Office Procedures	..... (3)
Bus 41	Essentials of Business Correspondence	..... (2)
Bus 50	Introduction to Data Processing	... (3)

\*Minimum skill level 40 words per minute required to qualify for major. If skill level attained in Bus 21A, student is excused from Bus 21B.

\*\*Bus 1A will be substituted if student has completed one year of high school bookkeeping.

\*\*\*Designed for bank tellers, file clerks, bookkeepers, etc. Not intended for secretarial staff members.

**BEHAVIORAL SCIENCE**

The requirement for a major in Behavioral Science may be satisfied by taking 18 units from the following list, concentrating in the following three groups of primary interest:

I. Required courses for the major

**Anthropology**

Anthro 1	Physical Anthropology	..... (3)
Anthro 2	Cultural Anthropology	..... (3)

**Psychology**

Psych 1A	General Psychology	..... (3)
Psych 1B	Advanced General Psychology	.... (3)
Psych 2	Intro. to Psychological Psych.	..... (3)
Psych3/TA 3	Psychology of Personal and Social Adjustment	..... (3)
Psych 9/HR 9	Interviewing and Counseling	..... (3)
Psych 11AB/HR 11AB	Practicum	..... (3)
Psych 12/Bus 26/Math 12	Elementary Statistics	..... (3)
Psych 14	Abnormal Psychology	..... (3)
Psych 16	The Psychology of Interpersonal Relationships	..... (3)
Psych 17/Sociol 17	Social Psychology	..... (3)
Psych 20/ECE 20	Develop. Psych. of Children	..... (3)
Psych 22/ECE 22	Principles of Child Development and Observation	..... (3)
Psych 27/ECE 27/PL 1	Understanding Exceptional Students	..... (3)
Psych 30	Psychology of Adolescence	..... (3)
Psych 35	Developmental Psychology: Conception to Death	..... (3)

**Sociology**

Sociol 1	Principles of Sociology	..... (3)
Sociol 2	Contemporary Social Problems	.... (3)
Sociol 17/Psych 17	Social Psychology	..... (3)
Sociol 33	Marriage and the Family	..... (3)

II. Recommended as electives (do not fulfill major requirements)

Bio 3	Principles of Biological Science	... (4)
Jrn 3	Mass Communications	..... (3)
Psych 15/Sociol 15	Social and Psychological Dynamics of Drug Use	..... (3)
Psych 18	Research in Psychology	..... (1)



## MAJORS

Psych 21/ ECE 21	Early Childhood Socialization: Children, Family & Community .. (3)
Psych 26/ ECE 26	Psychology of Parenthood ..... (3)
Psych 36	Psychology of Human Sexuality ... (3)
Psych 40	Psychology of Crisis Counseling .. (3)
Psych 46/ LE 46	The Mentally Ill, Alcoholic, Drug Addict and the Law ..... (3)
Zool 1B	General Zoology ..... (4)

Transfer students planning to major in these areas should take the IVC General Major and complete requirements listed in the catalog of the school to which they anticipate transferring.

### BILINGUAL-BICULTURAL STUDIES

Twenty-one to 24 units required for the major

#### I. Required courses for the major

Eng 52	Introduction to Linguistics ..... (3)
Eng 46A	The Mexican American in Literature ..... (3)
Hist 30	Mexico & the American Southwest. (3)
Span 42	Introduction to Mexican American Studies ..... (3)

#### Required for monolingual students only

*Span 2	Elementary Spanish ..... (4)
*Span 3	Intermediate Spanish ..... (4)
*Span 4	Intermediate Spanish ..... (4)

#### Required for bilingual students only

*Span 20B	Bilingual Spanish ..... (4)
*Span 21	Intermediate Bilingual Spanish .... (4)
*Span 22	Advanced Bilingual Spanish ..... (4)

\*These courses may be waived on the basis of language proficiency examination.

### BOOKKEEPING

Twenty units required for the major

#### I. Required courses for the major

Bus 10A	Practical Bookkeeping ..... (3)
Bus 10B	Practical Bookkeeping ..... (3)
Bus 21AB	Proficiency-Exit Typewriting ..... (2-2) (40 wpm skill level required)
Bus 23	Office Machines ..... (3)
Bus 24	Records Management ..... (3)
Bus 50	Introduction to Data Processing ... (3)

#### II. Acceptable courses for the major (select a minimum of 3 units)

Ag 25	Agriculture Bus. Management ..... (3)
Ag 26	Agriculture Business Organization and Management ..... (3)
Bus 2	Introduction to Business ..... (3)
Bus 3	Business Management ..... (3)
Bus 4	Principles of Marketing ..... (3)
Bus 11	Personal Finance ..... (3)
Bus 12	Personal Income Tax ..... (2)
Bus 13	Applied Business Law ..... (3)
Bus 39	Office Procedures ..... (3)

#### III. Recommended electives (do not fulfill requirements for the major). These courses will assist students in gaining additional experience for the major.

WE Gen 70/ WE Occ 80	Personal Efficiency ..... (3) (4)
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WE Gen 71/ WE Occ 81	Motivation ..... (3) (4)
WE Gen 72/ WE Occ 82	Labor and the Economy ..... (3) (4)
WE Gen 73/ WE Occ 83	Laws Affecting Employees ..... (3) (4)

### BUSINESS SUPERVISION

Twenty-one units required for the major

#### I. Required courses for the major

Bus 2	Introduction to Business ..... (3)
Bus 3	Business Management ..... (3)
Bus 6	Management Concepts of Supervision ..... (3)
Bus 7	Human Relations in Management ... (3)
Bus 10A	Practical Bookkeeping ..... (3)
Bus 13	Applied Business Law ..... (3)
Bus 50	Introduction to Data Processing ... (3)

#### II. Recommended electives (do not fulfill requirements for the major). These courses will assist students in gaining additional experience for the major.

WE Gen 70/ WE Occ 80	Personal Efficiency ..... (3) (4)
WE Gen 71/ WE Occ 81	Motivation ..... (3) (4)
WE Gen 72/ WE Occ 82	Labor and the Economy ..... (3) (4)
WE Gen 73/ WE Occ 83	Laws Affecting Employees ..... (3) (4)

### BUSINESS—TRANSFER

Twenty units required for the major

#### I. Required courses for the major

Bus 1A	Principles of Accounting ..... (4)
Bus 1B	Principles of Accounting ..... (4)
Bus 5A	Business Law ..... (3)
Econ 1	Principles of Economics ..... (3)
Econ 2	Principles of Economics ..... (3)

#### II. Acceptable courses for the major (select a minimum of 3 units)

Bus 2	Introduction to Business ..... (3)
Bus 5B	Business Law ..... (3)
Bus 9	Math. for Business Analysis ..... (3)
Bus 23	Office Machines ..... (3)
Bus 26	Elementary Statistics ..... (3)
Bus 42	Business Correspondence ..... (3)
Bus 50	Introduction to Data Processing ... (3)

### CARPENTRY

Twenty-four units required for the major

#### I. Required courses for the major

Carp 1	The Apprenticeship & Math ..... (3)
Carp 2	Pre-job and Plot Planning ..... (3)
Carp 3	Rough Framing ..... (3)
Carp 4	Roof Framing ..... (3)
Carp 5	Interior and Exterior Finish ..... (3)
Carp 6	Stair Building ..... (3)
Carp 7	Concrete and Forms ..... (3)
Carp 8	Heavy Timber Construction and Welding ..... (3)

**CINEMATOGRAPHY**

**Motion Picture Production Option**

Twenty-two units required for the major

- I. Required courses for the major
  - Ph 5/Jrn 5 Introduction to Photography ..... (3)
  - MPP 10/Eng 56 Introduction to Motion Picture Production ..... (3)
  - MPP 11 Intermediate Motion Picture Production ..... (3)
  - MPP 12 Advanced Motion Picture Production ..... (3)
  - MPP 13 TV Station Observation ..... (1)
  - Eng 54/Hum 54/Introduction to Film History and MPP 54 Criticism ..... (3)
  - Jrn 3 OR Mass Communications ] (3)
  - Ph 8 Multi-Media ] (3)
- II. Acceptable courses for the major (three units required from the following courses)
  - Art 22A OR Design ] (3)
  - Art 22B Design ] (3)
  - Hum 25 The Humanities ..... (3)
  - Jrn 3 Mass Communications ..... (3)
  - Mus 30 Introduction to Music Literature and Listening ..... (3)
  - Ph 8 Multi-Media ..... (3)
  - Eng 53AB Creative Writing ..... (3-3)
  - Jrn 1 Introduction to Journalism ..... (3)

**Photography Option**

Twenty-one units required for the major

- I. Required courses for the major
  - Jrn 3 Mass Communications ..... (3)
  - Ph 5/Jrn 5 Introduction to Photography ..... (3)
  - Ph 6 Intermediate Photography ..... (3)
  - Ph 7 Advanced Photography ..... (3)
  - MPP 10/ Eng 56 OR Introduction to Motion Picture Production ] (3)
  - Eng 54/Hum 54/Introduction to Film History MPP 54 Criticism ] (3)
- II. Six units from the following courses. Three units must be in either psychology or art.
  - Art 22A OR Design ] (3)
  - Art 22B Design ] (3)
  - Art 3A OR History & Appreciation of Art ] (3)
  - Art 3B History & Appreciation of Art ] (3)
  - Psych 1A General Psychology ..... (3)
  - Psych 5 Psychology of Effective Behavior .. (3)
  - Jrn 1 Introduction to Journalism ..... (3)
  - Ph 8 Multi-Media ..... (3)
  - Eng 56/ MPP 10 OR Introduction to Motion Picture Production ] (3)
  - Eng 54/Hum 54/Introduction to Film History MPP 54 Criticism ] (3)

**COSMETOLOGY**

Forty-five units required for the major

- I. Required courses for the major
  - Cos 50A Introduction to Cosmetology ..... (10)
  - Cos 50B Introduction to Cosmetology ..... (10)
  - Cos 52A Intermediate Cosmetology ..... (10)
  - Cos 52B Intermediate Cosmetology ..... (10)
  - Cos 54A Advanced Cosmetology ..... (5)

**DATA PROCESSING**

Twenty units required for the major

- I. Required courses for the major
  - Bus 1A Principles of Accounting ..... (4)
  - Bus 1B Principles of Accounting ..... (4)
  - Bus 50 Introduction to Data Processing ... (3)
  - Bus 52 Computer Programming I ..... (3)
  - Bus 57 Programming in Basic..... (3)
- II. Acceptable courses for the major
  - Bus 53 Computer Programming II..... (3)
  - Bus 54 Data Processing Systems ..... (3)
- III. Recommended electives (do not fulfill requirements for the major). These courses will assist students in gaining additional experience for the major.
  - WE Gen 70/ WE Occ 80 Personal Efficiency ..... (3) (4)
  - WE Gen 71/ WE Occ 81 Motivation ..... (3) (4)
  - WE Gen 72/ WE Occ 82 Labor and the Economy ..... (3) (4)
  - WE Gen 73/ WE Occ 83 Laws Affecting Employees ..... (3) (4)

**EARLY CHILDHOOD EDUCATION**

Twenty-seven units required for the major

- I. Required courses for the major
  - ECE 20/ Psych 20 Developmental Psychology of Children ..... (3)
  - ECE 21/ Psych 21 Early Childhood Socialization: Children, Family & Community .. (3)
  - ECE 22/ Psych 22 Principles of Child Development and Observation ..... (3)
  - ECE 23 Early Childhood Development Curriculum ..... (3)
  - ECE 24/TA 24 Creative Learning Experience for Young Children ..... (3)
  - ECE 25 Field Experience ..... (3)
  - ECE 26/ Psych 26 The Art of Parenting ..... (3)
  - ECE 28 Administration and Supervision in Early Childhood Education ..... (3)
  - TA 4/ECE 4 OR Bilingual-Multicultural Curriculum and Instruction ] (3)
  - ECE/Psych 34 Infant/Toddler Development ] (3)
- II. Additional courses from the following list are recommended:
  - ECE 29 Child Development Associate: Intro. & Initial Assessment ..... (2)
  - ECE 31 Child Development Associate Portfolio ..... (2)
  - Psych 1A General Psychology ..... (3)
  - Psych 1B Advanced General Psychology ... (3)
  - Psych 3/TA 3 Psychology of Personal and Social Adjustment ..... (3)
  - Psych 16 The Psychology of Interpersonal Relationships ..... (3)
  - Psych 17 Social Psychology ..... (3)
  - Psych 27/ Understanding Exceptional Students ..... (3)
  - ECE 27/PL 1 Psychology of Adolescence ..... (3)
  - Psych 30 Language Development for Young Children ..... (3)
  - TA 6/ECE 6 Mathematics for Young Children... (3)
  - TA 8/ECE 8

**ENGINEERING TRANSFER**

Forty-three units required for the major

I. Required courses for the major

Chem 1A	General Inorganic Chemistry .....	(5)
Math 3A	Analytic Geometry and Calculus ...	(5)
Math 3B	Analytic Geometry and Calculus ...	(5)
Math 4	Calculus & Differential Equations ..	(4)
Phys 4A	Principles of Physics .....	(4)
Phys 4B	Principles of Physics .....	(4)
Phys 4C	Principles of Physics .....	(4)

II. \*Acceptable courses for the major (select a minimum of 12 units)

Chem 1B	General Inorganic Chemistry .....	(5)
Chem 5	Quantitative Analysis .....	(4)
Chem 12	Organic Chemistry .....	(5)
Engr 2A	Engineering Drawing .....	(3)
Engr 5	Strength of Materials .....	(3)
Engr 6	Engineering Materials .....	(3)
Engr 11	Electric Circuits .....	(3)
Engr 15	Statics .....	(3)
Engr 16	Dynamics .....	(3)
**Engr 19	Statics and Dynamics .....	(6)
Math 12	Elementary Statistics .....	(3)
Math 47	Programming in Fortran .....	(3)

\*Prior to enrollment in any of these courses, engineering students should consult the catalog of the institution to which they plan to transfer and determine which courses on this list are applicable to their particular major. They should then enroll for as many of these applicable courses as possible.

\*\*Engr 19 is equivalent to Engr 15 and Engr 16.

It is essential that engineering students enroll in mathematics during the first semester.

Students majoring in engineering and planning to attend only two years at IVC are advised to give priority to lower division requirements for the major as they are prerequisites for most upper division engineering courses. If the student also wishes to complete his general education requirements, it will necessitate at least one additional year at IVC.

Some of the courses in categories I and II will be offered only once every two years. See a counselor for specifics on course offerings or any questions regarding the engineering program.

**ENGLISH**

Eighteen units required for the major

I. Required courses for the major (12 units)

Eng 1A	Reading and Composition .....	(3)
Eng 1B	Introduction to Literature .....	(3)
Eng 43AB OR	Survey of English Literature	] (3-3)
Eng 42AB	World Literature .....	

II. Acceptable courses for the major (6 units from the following courses)

Eng 52	Intro. to English Linguistics .....	(3)
Eng 54/Hum 54/	Introduction to Film History	] (3)
MPP 54	and Criticism .....	
Eng 50	Advanced Composition .....	(3)
Eng 53AB	Creative Writing .....	(3-3)
Eng 41	American Literature .....	(3)
Eng 45AF	Studies in Literature ....	(3-3-3-3-3)
Eng 46A	The Mexican American in	] (3)
	Literature .....	
Eng 46B	The Mexican American in	] (3)
	Literature .....	

**FIRE SCIENCE**

Eighteen to twenty-one units required for the major

I. Required for the major

Fire Sci 60	Introduction to Fire Technology ...	(3)
Fire Sci 61	Fundamentals of Fire Prevention ...	(3)
Fire Sci 62	Fire Protection Equipment	] (3)
	and Systems .....	
Fire Sci 63	Fundamentals of Fire Behavior	] (3)
	and Control .....	
Fire Sci 64	Fundamentals of Fire Protection ...	(3)
Fire Sci 65	Fundamentals of Personal Fire Safety	] (3)
	and Emergency Action .....	
Math 51	Basic Mathematics, or equivalent ..	(3)

**FOREIGN LANGUAGE**

Twenty units required for the major

I. Required courses for the major (a minimum of 20 units from any of the following sequences with a minimum concentration of 16 units in one language). Additional units to complete the major can be selected from a second language area and/or the acceptable course listed below.

**French**

Fr 1	Elementary French* .....	(4)
Fr 2	Elementary French** .....	(4)
Fr 3	Intermediate French .....	(4)
Fr 4	Intermediate French .....	(4)
Fr 10	Intermediate Conversational	] (3)
	French .....	
Fr 11	Intermediate Conversational	] (3)
	French .....	

**Spanish**

Span 1	Elementary Spanish*** .....	(4)
Span 2	Elementary Spanish**** .....	(4)
Span 3	Intermediate Spanish .....	(4)
Span 4	Intermediate Spanish .....	(4)
Span 10	Intermediate Conversational	] (3)
	Spanish .....	
Span 11	Advanced Conversational	] (3)
	Spanish .....	

**Spanish (Bilingual)**

Span 20A	Bilingual Spanish .....	(4)
Span 20B	Bilingual Spanish .....	(4)
Span 21	Intermediate Bilingual Spanish ....	(4)
Span 22	Advanced Bilingual Spanish .....	(4)
Span 23	Bilingual Oral Spanish .....	(3)

II. Acceptable courses for the major (will fulfill major requirements if 16 units minimum in one language have been completed in one of the areas listed below).

Fr 20A	French Drama: Reading and	] (2)
	Performance .....	
Fr 20B	French Drama: Reading and	] (2)
	Performance .....	
Fr 40	Introduction to French Civilization	] (3)
	and Culture .....	
Fr 41	Introduction to French Civilization	] (3)
	and Culture Beyond France ....	
Ger 1	Elementary German .....	(4)
Ger 2	Elementary German .....	(4)
Ger 10	Conversational German .....	(3)
Ger 11	Conversational German .....	(3)

Ital 1A	Elementary Italian	(2)
Ital 1B	Elementary Italian	(2)
Span 5A	Beginning Conversational Spanish and Culture	(2)
Span 5B	Beginning Conversational Spanish and Culture	(2)
Span 7	The Spanish Sound System	(3)
Span 24	Introduction to Spanish Literature (Conducted in Spanish)	(3)
Span 25	Introduction to Spanish American Literature (Cond. in Spanish)	(3)
Span 26	Introduction to Translation and Interpretation	(3)
Span 28A	The Mexican American in Literature	(3)
Span 28B	The Mexican American in Literature	(3)
Span 40	Civilization of Spain and Portugal	(3)
Span 41	Civilization of Spanish America and Brazil	(3)
Span 42	Introduction to Mexican American Studies	(3)
Span 43	History and Culture of the Philippines	(3)

Some courses may be waived through testing or advanced placement.

Students with one year high school foreign language skills in listening, speaking, reading and writing, meeting course 1 objectives, may enter course 2 (Fr 2, Span 2, Ger 2); two years, course 3 (Fr 3, Span 3, Ger 3); three years, course 3 or 4; four years, course 5. Intermediate level conversational courses should be taken concurrently: Fr 10 and Fr 3; Fr 4 and Fr 11; Span 10 and Span 3; Span 11 and Span 4. Students should first contact the language instructors and counselors in order to determine whether they have met the performance guidelines as defined in the description of competence by levels. This description is available in the Counseling Center and the Language Department.

\*Completion of Fr 1A and 1B sequence is equivalent to Fr 1.

\*\*Completion of Fr 2A and 2B sequence is equivalent to Fr 2.

\*\*\*Completion of Span 1A and 1B sequence is equivalent to Span 1.

\*\*\*\*Completion of Span 2A and 2B sequence is equivalent to Span 2.

### GENERAL BUSINESS

Twenty units required for the major

#### I. Required courses for the major

Bus 2	Introduction to Business	(3)
Bus 3	Business Management	(3)
Bus 4	Principles of Marketing	(3)
Bus 10A	Practical Bookkeeping	(3)
Bus 50	Introduction to Data Processing	(3)

#### II. Acceptable courses for the major

Bus 13	Applied Business Law	(3)
Bus 14	Practical Salesmanship	(3)
Bus 21AB	Proficiency-Exit Typewriting	(2-2)
Bus 23	Office Machines	(3)
Bus 24	Records Management	(3)
Bus 41	Essentials of Business Correspondence	(2)
Bus 43	Business Correspondence in Spanish	(3)
Bus 79/Jrn 8	Public Relations Techniques	(3)

III. Recommended electives (do not fulfill requirements for the major). These courses will assist students in gaining additional experience for the major.

WE Gen 70/		
WE Occ 80	Personal Efficiency	(3) (4)
WE Gen 71/		
WE Occ 81	Motivation	(3) (4)
WE Gen 72/		
WE Occ 82	Labor and the Economy	(3) (4)
WE Gen 73/		
WE Occ 83	Laws Affecting Employees	(3) (4)

### GENERAL MAJOR

Completion of a minimum of eighteen units of lower division courses that are required or recommended subjects as specified for upper division standing in a designated major by a college to which the student plans to transfer.

This major provides for students whose lower division preparation for a specific college requires courses in more than one division. Some examples of such majors (taken at random from the University of California publication "Prerequisites and Recommended Subjects" and from the California State University, San Diego catalog) are as follows:

Agriculture	Agriculture, Mathematics, Social Science, Physical Science
Art Design	Art, Anthropology, History, Philosophy
Anthropology	Biological Science, Psychology, English, Mathematics
Biological Science	Biological Science, Chemistry, Physics, Mathematics
Business	Business, Social Science, Mathematics, English
Comparative Literature	English, History, Philosophy, Foreign Language
Criminology	English, Foreign Language, Social Science, Mathematics
Economics	Social Science, Mathematics, Business
English	English, Social Science, Philosophy
Engineering	Engineering, Mathematics, Physical Science
Foreign Language	Foreign Language, History, Philosophy
History	History, Mathematics, Foreign Language
Home Economics	Biological Science, Physics, Mathematics, Social Science
Physical Education	Physical Education, Biological Science, Mathematics, Social Science
Pre-Dentistry	Biological Science, Physical Science, English, Social Science
Pre-Physiotherapy	Biological Science, Physical Science, Mathematics, Social Science
Psychology	Biological Science, Mathematics, Physical Science, Philosophy, Anthropology, Sociology
Recreation	Physical Education, Biological Science, Recreation, Social Science
Sociology	Psychology, Philosophy, Mathematics

Students in the General Major will work out in conference with a counselor a course of study that will meet requirements for their specific majors at the selected colleges they expect to attend.

### GENERAL OFFICE TECHNICIAN

Twenty units required for the major

#### I. Required courses for the major

Bus 21AB	Proficiency-Exit Typewriting	(2-2)
	(50 wpm skill level required)	
Bus 22	Word Processing	(3)

Bus 23	Office Machines	(3)
Bus 24	Records Management	(3)
Bus 41 OR	Essentials of Bus. Corresp.	] (2 or 3)
Bus 42	Business Correspondence	

Phys 2B OR	General Physics	] (4)
Phys 4A	Principles of Physics	
Phys 4B	Principles of Physics	
Phys 4C	Principles of Physics	

II. Acceptable courses for the major (minimum of 6 or 7 units required)

Bus 10A	Practical Bookkeeping	(3)
Bus 13	Applied Business Law	(3)
Bus 39	Office Procedures	(3)
Bus 40	Grammar and Usage	(3)
Bus 43	Bus. Correspondence in Spanish	(3)
Bus 50	Introduction to Data Processing	(3)

III. Recommended electives (do not fulfill requirements for the major). These courses will assist students in gaining additional experience for the major.

WE Gen 70/		
WE Occ 80	Personal Efficiency	(3) (4)
WE Gen 71/		
WE Occ 81	Motivation	(3) (4)
WE Gen 72/		
WE Occ 82	Labor and the Economy	(3) (4)
WE Gen 73/		
WE Occ 83	Laws Affecting Employees	(3) (4)

**GENERAL SCIENCE**

Successful completion of all courses offered in one subject field (Anatomy, Biology, Botany, Chemistry, Geology, Math, Physics, Physiology, and Zoology) may be combined with courses from at least two other subject fields (within the general area of Natural-Physical Science) to accumulate 18 hours for the General Science Major.

The most reliable guide for appropriate course combinations in this major will be the catalog from the specific college to which the student will transfer.

**Natural Science**

Anat 8	Human Anatomy	(4)
Anat 10	Human Anatomy & Physiology	(5)
Bio 3	Principles of Biological Science	(4)
Bio 21	General Microbiology	(4)
Bot 1A	General Botany	(4)
Bot 1B	General Botany	(4)
Env Sci 5/Ag 5	Man and His Environment	(3)
Physio 1	Human Physiology	(4)
Zool 1A	General Zoology	(4)
Zool 1B	General Zoology	(4)
Zool 10	Life of the Past: An Introduction to Paleontology	(3)

**Physical Science**

Anthro 1	Physical Anthropology	(3)
Astron 21	Elementary Astronomy	(3)
Chem 1A	General Inorganic Chemistry	(5)
Chem 1B	General Inorganic Chemistry	(5)
Chem 5	Quantitative Chemistry	(4)
Chem 12	Organic Chemistry	(5)
Geog 1	Physical Geography	(3)
Geol 1A	Physical Geology	(4)
Math 2	Advanced Algebra & Trigonometry	(5)
Math 3A	Analytic Geometry & Calculus	(5)
Math 3B	Analytic Geometry & Calculus	(5)
Math 4A	Calculus & Differential Equations	(4)
Phys Sci 25	Introduction to Physical Science	(4)
Phys 2A	General Physics	(4)

**GERONTOLOGY**

Twenty-three units required for the major

I. Required courses for the major

Geron 1	Fundamentals of Aging	(3)
Geron 2	Sociology of Aging	(3)
Geron 3	Psychology of Aging	(3)
Geron 4	Biology of Aging	(3)
Geron 5	Aging and the Quality of Life	(3)
Geron 11	Gerontology Practicum	(2)
Psych 1A	General Psychology	(3)
Sociol 1	Principles of Sociology	(3)

**GOVERNMENTAL MANAGEMENT — PUBLIC SERVICE ADMINISTRATION**

Twenty-one to 22 units required for the major

I. Required courses for the major

Bus 8	Personnel Management	(3)
Bus 70	Fundamentals of Governmental Management	(3)
Bus 71	State and Local Government Management	(3)
Bus 72	Finance Management	(3)

II. Acceptable courses for the major (select three courses from the following)

Bus 6	Management Concepts of Supervision	(3)
Bus 7	Human Relations in Management	(3)
Bus 50	Introduction to Data Processing	(3)
WE Occ 82	Labor and the Economy	(4)
	or	
WE Occ 83	Laws Affecting Employees	(4)

**GRAPHIC ARTS**

Twenty-two units required for the major

I. Required courses for the major

GA 10	Graphic Communication I	(2)
GA 11	Graphic Communication II	(3)
GA 12	Composition, Layout & Paste-up	(3)
GA 20	Offset Printing I	(3)
GA 21	Offset Printing II	(3)
GA 22	Photography and Platemaking	(3)
GA 23	Bindery, Cutting and Distribution	(2)
GA 30	Graphics Plant Operation and Management Fundamentals	(3)

**HUMAN RELATIONS**

Areas of emphasis: Community Mental Health Worker, Counseling, School, Social Services, Personnel, Employment Counseling and Supervision

Twenty-four units required for the major

I. Required courses for the major

Psych 1A	General Psychology	(3)
Psych 3/TA 3	Psychology of Personal and Social Adjustment	(3)

Psych 9/HR 9	Interviewing and Counseling	(3)
Psych 11A/		
HR 11A	Practicum	(3)
Sociol 1	Principles of Sociology	(3)

II. With the approval of his/her counselor and the Division Chairperson, the student will select a minimum of nine units (depending on areas of emphasis) from the following courses. It is considered advisable for students in certain areas of emphasis to take more than nine units from the list below.

Anthro 2	Cultural Anthropology	(3)
Bus 6	Management Concepts of Supervision	(3)
Bus 7	Human Relations in Management	(3)
Bus 50	Introduction to Data Processing	(3)
Bus 79	Public Relations Techniques	(3)
HR 8/Psych 8	Personal and Career Development	(3)
HR 10/Psych 10	Small Group Leadership	(3)
Jrn 3	Mass Communications	(3)
Psych 1B	Advanced General Psychology	(3)
Psych 2	Introduction to Physiological Psychology	(3)
Psych 5	Psychology of Effective Behavior	(3)
Psych 12/		
Math 12/Bus 26	Elementary Statistics	(3)
Psych 14	Abnormal Psychology	(3)
Psych 15/	Social and Psychological	
Sociol 15	Dynamics of Drug Use	(3)
Psych 16	The Psychology of Interpersonal Relationships	(3)
Psych 17/		
Sociol 17	Social Psychology	(3)
Psych 20/	Developmental Psychology of Children	(3)
ECE 20		
Psych 26/		
ECE 26	Psychology of Parenthood	(3)
Psych 30	Psychology of Adolescence	(3)
Psych 35	Developmental Psychology: Conception to Death	(3)
Psych 40	Psychology of Crisis Counseling	(3)
Psych 46/	The Mentally Ill, Alcoholic, Drug Addict and the Law	(3)
LE 46		
Sociol 2	Contemporary Social Problems	(3)
Sociol 10	Sociology of Minority Groups	(3)
Sociol 33	Marriage and the Family	(3)
Sociol 41/	Mass Sociology and Collective Behavior	(3)
LE 41		

Strongly recommended that students who do not speak Spanish take a series of courses in Conversational Spanish.

**INDIVIDUAL INTERDISCIPLINARY MAJOR**

This major for an Associate Degree provides occupational-oriented students with an area of concentration within two divisions to meet a specific job need.

The requirements for the major will be met by satisfactory completion of nine (or more) units in each division.

The courses required will be approved by division chairpersons, a counselor, and the Dean of Vocational-Technical Education. The courses approved will be from courses already established. The student will initiate the request for the major through the Counseling Office.

**INDUSTRIAL POWER TECHNOLOGY**

Twenty-eight units required for the major

I. Required courses for the major

Ag 33A	Farm Power	(3)
Ag 33B	Farm Power	(3)
Ag 37	Small Gasoline Engines	(3)
Ag 35	Fluid Power	(4)
Auto Tech 52	Transmission Systems	(3)
Auto Tech 58	Automotive Air Conditioning	(3)
HM 40/Ag 39	Diesel Engine Repair	(3)

Three (3) units to be selected from the following courses

Ag 50	Shop Mathematics	(3)
Eng 55	Technical & Report Writing	(3)
Weld 31	Basic Welding	(3)
WE Gen 70	Personal Efficiency	(3)
WE Gen 71	Motivation	(3)
WE Gen 72	Labor and the Economy	(3)
WE Gen 73	Laws Affecting Employees	(3)

**JOURNALISM**

Twenty-one units required for the major

I. Required courses for the major

Jrn 1	Introduction to Journalism	(3)
Jrn 2ABC	Newspaper Production	(4-4)
MPP 10/Eng 56	Introduction to Motion Picture Production	(3)

II. Acceptable courses for the major (minimum of 3 units from the following courses)

Econ 1	Principles of Economics	(3)
Econ 2	Principles of Economics	(3)
Eng 1B	Introduction to Literature	(3)
Jrn 8/Bus 79	Public Relations Techniques	(3)
Sociol 1	Principles of Sociology	(3)
Sociol 2	Contemporary Social Problems	(3)
MPP 10/Eng 56	Introduction to Motion Picture Production	(3)
Poly Sci 1	Introduction to Political Science	(3)
*Poly Sci 2	American Government & Politics	(3)
Bus 20	Elementary Typewriting	(3)
Sp 1	Oral Communication	(3)
Eng 53AB	Creative Writing	(3)
Ph 8	Multi-Media	(3)
Eng 54/Hum 54/	Introduction to Film History & Criticism	(3)
MPP 54		

\*If not used to satisfy the American Institutions requirement for graduation.

**LAW ENFORCEMENT**

Twenty-one units required for the major

I. Required courses for the major

LE 21	Introduction to the Administration of Justice	(3)
LE 33	Concepts of Criminal Law	(3)
LE 35	Legal Aspects of Evidence	(3)
LE 36	Principles and Procedures of Justice System	(3)
LE 38	Community Relations	(3)

II. Acceptable courses for the major (6 units from the following courses)

LE 22	Police Patrol Procedures	(3)
LE 24	Traffic Control and Vehicle Code	(3)
LE 26	Traffic Accident Investigation	(3)
LE 29	Preliminary Investigation and Reporting	(3)
LE 34	Criminal Investigation	(3)
LE 37	Juvenile Control	(3)
LE 39	Arrest and Firearms	(3)
	Any Sp Studies in the Law Enforcement Area	(3)

III. Recommended as electives (do not fulfill major requirements)

LE 23	Defensive Tactics	(1)
LE 40	Advanced Officers Course	(1)
LE 41	Mass Sociology and Collective Behavior	(3)
LE 42	Nonlethal Chemical Agents	(½)
LE 43	Reserve Officers Class Level II	(3)
LE 44	Reserve Officers Class Level I	(6)
LE 47	Field Training Officers	(1)
LE 48	Advanced Criminal Law	(3)

**LEGAL ASSISTANT**

Twenty-one units required for the major

I. Required courses for the major

Bus 5A	Business Law	(3)
LA 21	Research and Criminal Law	(3)
LA 22	Civil Procedures and Family Law	(3)
LA 23	Civil Discovery and Torts	(3)
LA 24	Corporations and Bankruptcy	(3)
LA 25	Real Estate Law for Legal Assistants	(3)
LA 26	Wills-Trusts-Probate	(3)

**LIBERAL STUDIES**  
(See Teacher Preparation)

**LIFE SCIENCE**

Eighteen units required for the major

I. Required courses for the major (minimum of 18 units from the following courses)

Anat 8	Human Anatomy	(4)
Anat 10	Human Anatomy and Physiology	(5)
Bio 3	Principles of Biological Science	(4)
Bio 21	General Microbiology	(4)
Bot 1A	General Botany	(4)
Bot 1B	General Botany	(4)
Physio 1	Human Physiology	(4)
Zool 1A	General Zoology	(4)
Zool 1B	General Zoology	(4)
Env Sci 5/Ag 5	Man and His Environment	(3)
Anthro 1	Physical Anthropology	(3)

(maximum of 6 units from the following courses)

Chem 1A	General Inorganic Chemistry	(5)
Chem 1B	General Inorganic Chemistry	(5)
Chem 5	Quantitative Analysis	(4)
Chem 12	Organic Chemistry	(5)
Chem 2A	Introduction to Chemistry	(4)

**MACHINERY OPERATION AND MAINTENANCE**

Twenty-four units required for the major

I. Required courses for the major

HM 35	Heavy Equipment Operation and Maintenance	(5)
Ag 35	Fluid Power	(4)
Ag 37	Small Gasoline Engines	(3)
Weld 31	Basic Welding	(5)
Weld 32	Oxy-Acetylene Welding	(3)
Six (6) units to be selected from the following courses:		
Ag 50	Shop Mathematics	(3)
Eng 55	Technical & Report Writing	(3)
WE Gen 70	Personal Efficiency	(3)
WE Gen 71	Motivation	(3)
WE Gen 72	Labor and the Economy	(3)
WE Gen 73	Laws Affecting Employees	(3)

**MARKETING—SALES TECHNOLOGY**

Eighteen units required for the major

I. Required courses for the major

Bus 2	Introduction to Business	(3)
Bus 4	Principles of Marketing	(3)
Bus 13	Applied Business Law	(3)
Bus 14	Practical Salesmanship	(3)

II. Acceptable courses for the major (6 units from the following courses)

Bus 1A	Principles of Accounting	(4)
Bus 10A	Practical Bookkeeping	(3)
Bus 21AB	Proficiency—Exit Typewriting	(2-2)
Bus 23	Office Machines	(3)
Bus 65	Retail Sales Checking	(2)
Econ 1	Economics	(3)
Span 1	Elementary Spanish	(4)

**MATHEMATICS**

Eighteen units required for the major

I. Required courses for the major

Math 3A	Analytic Geometry & Calculus	(5)
Math 3B	Analytic Geometry & Calculus	(5)

II. Acceptable courses for the major

*Math C OR	Plane Trigonometry	] (3)(5)
*Math 2	Advanced Algebra and Trigonometry	
Math 4	Calculus & Differential Equations	(4)
Math 12	Elementary Statistics	(3)
Math 47	Programming in Fortran	(3)
Math 57	Programming in Basic	(3)

\*Either Math C or Math 2, but not both, are acceptable for the major.

**MEDICAL OFFICE ASSISTANT**

Twenty-four to twenty-five units required for the major

I. Required courses for the major

Bus 21AB	Proficiency-Exit Typewriting (40 wpm skill level required)	(2-2)
Bus 22	Word Processing	(3)
Bus 23	Office Machines	(3)
Bus 24	Records Management	(3)

MAJORS

Bus 41 OR	Essentials of Bus. Corresp.	] (2 or 3)	
Bus 42	Business Correspondence ...		
Bus 48	Medical Insurance .....		(3)
Bus 49A	Medical Terminology for Secretaries .....		(3)
Bus 49B	Medical Terminology for Secretaries .....	(3)	

II. Acceptable courses for the major (select a minimum of 3 units)

Bus 10A	Practical Bookkeeping .....	(3)
Bus 13	Applied Business Law .....	(3)
Bus 39	Office Procedures .....	(3)
Bus 40	Grammar and Usage .....	(3)
Bus 43	Business Correspondence in Spanish .....	(3)
Bus 50	Introduction to Data Processing ...	(3)

**MUSIC**

Twenty-nine units required for the major

I. Required for the major (minimum of 25 units from the following courses)

a. Academic courses (minimum of 20 units from the following courses)

Mus 8A	Beginning Musicianship .....	(2)
Mus 8B	Beginning Musicianship .....	(2)
Mus 8C	Intermediate Musicianship .....	(2)
Mus 8D	Intermediate Musicianship .....	(2)
Mus 9A	Beginning Harmony .....	(3)
Mus 9B	Beginning Harmony .....	(3)
Mus 9C	Intermediate Harmony .....	(3)
Mus 9D	Intermediate Harmony .....	(3)

Note: Music 8A and 9A must be taken concurrently and the sequence followed through 8D and 9D.

b. Applied Music (minimum of 5 units from the following courses). (Requirement may be waived through proficiency examination.)

Mus 10A	Beginning Group Piano I .....	(1)
Mus 32AD	Applied Music .....	(1-1-1-1)

c. Performance Ensembles (minimum of 8 units from the following courses)

Mus 17AF	Chamber Singers .....	(1-1-1-1-1-1)
Mus 18AF	Chamber Orchestra .....	(1-1-1-1-1-1)
Mus 27AF	Concert Band .....	(1-1-1-1-1-1)
Mus 28AF	College-Community Chorus .....	(1-1-1-1-1-1)

Note: All music majors are required to perform in at least one of the above college music organizations every semester enrolled.

II. Recommended as electives (do not fulfill major requirements)

Mus 10B	Beginning Group Piano II .....	(1)
Mus 11A	Intermediate Group Piano I .....	(1)
Mus 11B	Intermediate Group Piano II .....	(1)
Mus 12	Beginning Class Guitar .....	(1)
Mus 13	Intermediate Class Guitar .....	(1)
Mus 15A	Beginning Class Voice .....	(1)
Mus 15B	Beginning Class Voice .....	(1)

Mus 16	Intermediate Class Voice .....	(1)
Mus 19AF	Instrumental Ensemble ..	(1-1-1-1-1-1)
Mus 20A	History and Literature of Music ....	(3)
Mus 20B	History and Literature of Music ....	(3)
Mus 21AD	Brass, Woodwind and Percussion Methods .....	(2-2-2-2)
Mus 25AF	Stage Band .....	(1-1-1-1-1-1)
Mus 26AD	Rehearsal and Performance .	(1-1-1-1)
Mus 29AF	Estudiantina .....	(1-1-1-1-1-1)
Mus 31	Introduction to Twentieth Century Music .....	(3)
Mus 64	College-Community Band .....	(1)

**NURSING**

**Associate Degree Nursing**

Forty-six and one-half units of nursing required for the major. Thirty-two support course units required to complete the nursing program.

**Pre-Application Requirements**

English 1A .....	3
Satisfactory score on pre-entrance	
Math test or Math 51 .....	3
<b>TOTAL</b>	<b>6</b>

**Pre-Clinical Nursing**

HT 1	Introduction to Health Sciences ...	2
Psych 1A	General Psychology .....	3
Anat 10	Human Anatomy & Physiology ....	5
<b>TOTAL</b>	<b>TOTAL</b>	<b>10</b>

**First Semester**

Psych 35	Developmental Psychology: Conception to Death .....	3
Bio 21	Microbiology .....	4
NS 1A	Introduction to Patient Care I .....	4
NS 1B	Introduction to Patient Care II .....	4
NS 1C	Pharmacology I .....	1.5
<b>TOTAL</b>	<b>TOTAL</b>	<b>16.5</b>

**Second Semester**

Psych 16	Interpersonal Relationships .....	3
NS 2A	Maternity Cycle .....	5.5
NS 2B	Common Health Problems I .....	5.5
NS 2C	Pharmacology II .....	2
<b>TOTAL</b>	<b>TOTAL</b>	<b>16</b>

**Third Semester**

Humanities Elective .....	3	
NS 3A	Common Health Problems II .....	6.5
NS 3B	Common Health Problems III .....	6.5
NS 3C	Patient Care Management .....	1
<b>TOTAL</b>	<b>TOTAL</b>	<b>17</b>

**Fourth Semester**

Communication & Analytic Reasoning Course .....	3	
American Institutions Course .....	3	
NS 4A	Common Health Problems IV .....	4.5
NS 4B	Advanced Nursing .....	4.5
NS 4C	Nursing Trends .....	1
<b>TOTAL</b>	<b>TOTAL</b>	<b>16</b>



**Vocational Nursing**

Thirty-six units required for the major. Fourteen support course units required to complete the vocational nursing program.

**Pre-Application Requirements**

English 1A .....	3
Satisfactory score on pre-entrance Math test or Math 51 .....	3

TOTAL 6

**Pre-Clinical Nursing**

HT 1	Introduction to Health Sciences ...	2
Psych 1A	General Psychology .....	3
Anat 6	Human Anatomy & Physiology for LVN's .....	3

TOTAL 8

**First Semester**

Psych 35	Developmental Psychology: Conception to Death .....	3
NS 1A	Introduction to Patient Care I .....	4
NS 1B	Introduction to Patient Care II .....	4
NS 1C	Pharmacology I .....	1.5

TOTAL 12.5

**Second Semester**

Psych 16	Interpersonal Relationships .....	3
NS 2A	Maternity Cycle .....	5.5
NS 2B	Common Health Problems I .....	5.5
NS 2C	Pharmacology II .....	2

TOTAL 16

**Third Semester**

NS 3A	Common Health Problems II .....	6.5
NS 3B	Common Health Problems III .....	6.5
NS 3C	Patient Care Management .....	.5

TOTAL 13.5

**PHYSICAL EDUCATION**

Nineteen units required for the major

I. Required courses for the major

HE 1	Health Education .....	(3)
HE 2	First Aid .....	(3)
PE 6	Lifesaving .....	(2)
PE 50	Intro. to Physical Education .....	(2)
PE 61	Physical Education in the Elementary School .....	(3)

II. Select six (6) units from the following courses

PE 2ABCD	Gymnastics, Coed .....	(1-1-1-1)
PE 3ABCD	Physical Fitness, Women ....	(1-1-1-1)
PE 4ABCD	Badminton, Coed .....	(1-1-1-1)
PE 5ABCD	Swimming, Coed .....	(1-1-1-1)
PE 7	Water Safety Instructor Training ...	(2)
PE 8ABCD	Bowling, Coed .....	(1-1-1-1)
PE 9AH	Adapted Physical Exercises, Coed .....	(1-1-1-1-1-1-1-1)
PE 10ABCD	Team Sports .....	(1-1-1-1)
PE 11ABCD	Volleyball, Coed .....	(1-1-1-1)
PE 12ABCD	Tennis, Coed .....	(1-1-1-1)
PE 13	Advanced Tennis, Coed .....	(1)
PE 14ABCD	Recreational Games, Coed ..	(1-1-1-1)
PE 15ABCD	Figure Control for Women ...	(1-1-1-1)

PE 16ABCD	Group Slenderizing .....	(2-2-2-2)
PE 17ABCD	Physical Fitness, Men .....	(1-1-1-1)
PE 18ABCD	Golf, Coed .....	(1-1-1-1)
PE 19A	Karate, Coed .....	(1)
PE 19B	Karate, Coed .....	(1)
PE 19C	Advanced Karate .....	(1)
PE 20ABCD	Softball, Coed .....	(1-1-1-1)
PE 22ABCD	Racquetball and Handball, Coed .....	(1-1-1-1)
PE 23ABCD	Basketball for Women .....	(1-1-1-1)
PE 24ABCD	Basketball for Men .....	(1-1-1-1)
PE 25ABCD	Folk Dance, Coed .....	(1-1-1-1)
PE 26ABCD	Modern Dance, Coed .....	(1-1-1-1)
PE 27ABCD	Disco Dance, Coed .....	(1-1-1-1)
PE 28ABCD	Dance Theater, Coed .....	(2-2-2-2)
PE 29ABCD	Jazz Dance, Coed .....	(1-1-1-1)
PE 30ABCD	Song and Cheer .....	(2-2-2-2)
PE 31AB	Intercollegiate Football & PE ....	(2-2)
PE 32ABCD	Intercollegiate Basketball and PE .....	(2-2-2-2)
PE 33AB	Intercollegiate Track and PE ....	(2-2)
PE 34AB	Intercollegiate Baseball and PE ..	(2-2)
PE 35ABCD	Intercollegiate Wrestling and PE .....	(2-2-2-2)
PE 36AB	Intercollegiate Golf and PE .....	(2-2)
PE 37AB	Intercollegiate Cross Country and PE .....	(2-2)
PE 38AB	Intercollegiate Tennis and PE ...	(2-2)
PE 40ABCD	Synchronizing Swimming ....	(2-2-2-2)
PE 41AB	Intercollegiate Volleyball and PE .....	(2-2)
PE 42AB	Intercollegiate Soccer and PE ...	(2-2)
PE 43AB	Intercollegiate Softball and PE ...	(2-2)
PE 44/LE 23	Defensive Tactics .....	(1)
PE 47	Coaching Techniques of Wrestling .....	(2)
PE 51	Structuring Intramurals .....	(2)
PE 52AB	Theory of Baseball .....	(2-2)
PE 53AB	Theory of Basketball, Coed .....	(2-2)
PE 54AB	Theory of Football .....	(2-2)
PE 56	Care and Prevention of Athletic Injuries .....	(2)
PE 58	Psychology of Coaching .....	(2)
PE 59AB	Sports Officiating, Men .....	(3-3)
PE 60AB	Sports Officiating, Women .....	(3-3)
PE 62AB	Physical Education for Special Olympics .....	(3-3)
PE 64AB	Horsemanship-Equitation .....	(1-1)
PE 66	Intermediate Horsemanship-Equitation .....	(1)
Anat 8	Human Anatomy .....	(4)
Anat 10	Human Anatomy & Physiology ....	(5)

**PHYSICAL SCIENCE**

Eighteen units required for the major

I. Required courses for the major (minimum of 18 units from the following courses)

Astron 21	Elementary Astronomy .....	(3)
Chem 1AB	General Inorganic Chemistry ....	(5-5)
Chem 5	Quantitative Analysis .....	(4)
Chem 12	Organic Chemistry .....	(5)
Env Sci 5/Ag 5	Man and His Environment .....	(3)
Geog 1	Physical Geography .....	(3)
Geol 1A	Physical Geology .....	(4)
Phys Sci 2	Introduction to Physical Science ...	(4)
Phys 2AB	General Physics .....	(4-4)
Phys 4ABC	Principles of Physics .....	(4-4-4)

II. Acceptable courses for the major (maximum of 6 units from the following courses)

Engr 23	Slide Rule & Computations .....	(1)
Math 2	Advanced Algebra and Trigonometry .....	(5)
Math 3AB	Analytic Geometry & Calculus ...	(5-5)
Math 4	Calculus & Differential Equations ..	(4)

**PLANT SCIENCE**

Twenty-three units required for the major

I. Required courses for the major

Ag 40	Soils .....	(3)
Ag 41	Fertilizers .....	(3)
Ag 42	Plant Science & Forage Crops .....	(4)
Ag 43	Field and Cereal Crops .....	(4)
Ag 45	Vegetable Production .....	(3)
Ag 49	Weeds and Weed Control .....	(3)

II. Acceptable courses for the major (3 units from the following courses)

Ag 14	Entomology .....	(3)
Ag 28	Heavy Equipment Operation and Maintenance .....	(5)
Ag 30	Agricultural Mechanics .....	(3)
Ag 32	Irrigation and Drainage .....	(3)
Ag 33A	Farm Power .....	(5)
Ag 65	Control of Insects and Other Pests .....	(3)
Chem 2A	Introduction to Chemistry .....	(4)
Eng 55	Technical and Report Writing .....	(3)
Weld 31	Basic Welding .....	(5)
WE Occ 80	Personal Efficiency .....	(4)
WE Occ 81	Motivation .....	(4)
WE Occ 82	Labor and the Economy .....	(4)
WE Occ 83	Laws Affecting Employees .....	(4)

**RECREATION**

Eighteen units required for the major

I. Required courses for the major

Rec 70	Introduction to Leisure .....	(3)
Rec 72	Outdoor Recreation .....	(3)
Rec 73	Recreation for Special Groups .....	(4)
Rec 74	Introduction to Community Recreation .....	(3)

Two or three units to be selected from the following courses

Art 22A	Design .....	(3)
PE 59AB	Sports Officiating, Men .....	(3-3)
PE 60AB	Sports Officiating, Women .....	(3-3)
PE 61	Physical Education in the Elementary Schools .....	(3)
PE 62AB	Physical Education for Special Olympics .....	(3-3)
Rec 71	Social Recreation .....	(3)
PE 6	Lifesaving .....	(2)

II. Acceptable courses for the major (two or three units to be selected from the following courses)

PE 3ABCD	Physical Fitness, Women ....	(1-1-1-1)
PE 4ABCD	Badminton, Coed .....	(1-1-1-1)
PE 5ABCD	Swimming, Coed .....	(1-1-1-1)
PE 8ABCD	Bowling, Coed .....	(1-1-1-1)
PE 10ABCD	Team Sports .....	(1-1-1-1)
PE 11ABCD	Volleyball, Coed .....	(1-1-1-1)
PE 12ABCD	Tennis, Coed .....	(1-1-1-1)
PE 14ABCD	Recreational Games, Coed ..	(1-1-1-1)

PE 15ABCD	Figure Control for Women ...	(1-1-1-1)
PE 17ABCD	Physical Fitness, Men .....	(1-1-1-1)
PE 20ABCD	Softball, Coed .....	(1-1-1-1)
PE 23ABCD	Basketball for Women .....	(1-1-1-1)
PE 24ABCD	Basketball for Men .....	(1-1-1-1)
PE 29ABCD	Jazz Dance, Coed .....	(1-1-1-1)

**REHABILITATION TECHNICIAN FOR THE PHYSICALLY LIMITED**

Twenty-two to twenty-three units required for the major

I. Required courses for the major

PL 1/Psych 27/Understanding Exceptional Students .....	(3)	
ECE 27	Practicum Experience to Work with the Physically Limited Person ..	(2-2)
PL 2AB	General Psychology	] (3)
Psych 1A OR Psych 5	Psych. of Effective Behavior ....	

One of the following options must be completed. Additional units may be taken from other options and/or Area II (Acceptable courses for the major) to total 14-15 units.

Option A

PL 20	Literary Braille .....	(3)
PL 21	Psychology of Physical Disabilities .....	(3)

Option B

PL 10	Beginning Communication with the Deaf .....	(4)
PL 11	Intermediate Communication with the Deaf .....	(4)

Option C

PL 33	Introduction to Audiology .....	(3)
PL 34	Audiometry and Hearing Conservation .....	(3)

Option D

HA 15A OR HA 15B OR HA 15C	Hospital Nursing Assistant Community Health Aide Developmental Disability/Mental Retardation Aide .....	] (9)
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II. Acceptable courses for the major

PE 62AB	Physical Education for Special Olympics .....	(3-3)
PL 12	Advanced Communication with the Deaf .....	(3)
PL 13AD	Communication with the Deaf in the College Classroom .....	(1-1-1-1)
PL 30	Intro. to Speech & Language .....	(3)
PL 31	Interview and Testing Techniques for Speech & Hearing Problems .....	(3)
PL 32	Behavior Modification Techniques for Speech & Hearing Pathology ....	(3)
PL 40	Introduction to Physical Therapy ..	(3)
PL 41	Intro. to Occupational Therapy ....	(3)
Psych 3	Psychology of Personal and Social Adjustment .....	(3)
Psych 9	Interviewing and Counseling .....	(3)
Rec 73	Recreation for Special Groups .....	(4)
Sociol 1	Principles of Sociology .....	(3)
Sp 1	Oral Communication .....	(3)
Sp 30	Voice & Articulation Development ..	(3)

**SECRETARIAL\***

Twenty-two or 23 units required for the major

I. Required for the major

Bus 21AB	Proficiency-Exit Typewriting	..... (2-2)
Bus 22	Word Processing	..... (3)
Bus 23	Office Machines	..... (3)
Bus 24	Records Management	..... (3)
Bus 32AB	Dictation & Transcription Lab	... (3-3)
Bus 39	Office Procedures	..... (3)
Bus 40	Grammar and Usage	..... (3)
Bus 41 OR	Essentials of Business	] (2)
	Correspondence	
Bus 42	Business Correspondence	..... (3)

\*To qualify for a secretarial major, the student must have a minimum skill level of 60 words a minute in typing and 100 words a minute in shorthand dictation.

II. Recommended electives (do not fulfill requirements for the major). These courses will assist students in gaining additional experience for the major.

WE Gen 70/		
WE Occ 80	Personal Efficiency	..... (3) (4)
WE Gen 71/		
WE Occ 81	Motivation	..... (3) (4)
WE Gen 72/		
WE Occ 82	Labor and the Economy	..... (3) (4)
WE Gen 73/		
WE Occ 83	Laws Affecting Employees	..... (3) (4)

**SOCIAL SCIENCE**

I. Required courses for the major

The requirements for a major in Social Science may be satisfied by taking 18 units from the following list to include at least one course from three of the seven fields:

**Anthropology**

Anthro 1	Physical Anthropology	..... (3)
Anthro 2	Cultural Anthropology	..... (3)
Anthro 3A	Introduction to Archaeological Site Surveying	..... (3)
Anthro 3B	Introduction to Archaeological Excavations	..... (3)
Anthro 4	California Indians	..... (3)
Anthro 5	Archaeology: Theory, Prehistory and Laboratory	..... (3)
Anthro 6	Indians of North America	..... (3)

**Economics**

Econ 1	Principles of Economics	..... (3)
Econ 2	Principles of Economics	..... (3)

**Geography**

Geog 1	Physical Geography	..... (3)
Geog 2	Cultural Geography	..... (3)

**History**

Hist 4A	History of Western Civilization	..... (3)
Hist 4B	History of Western Civilization	..... (3)
Hist 8A	History of the Americas	..... (3)
Hist 8B	History of the Americas	..... (3)
Hist 10	History of Modern Russia	..... (3)
Hist 17A	United States History	..... (3)
Hist 17B	United States History	..... (3)
Hist 30	Mexico & the American Southwest	..... (3)
Hist 40	Civilization of Spain & Portugal	..... (3)
Hist 41	Civilization of Spanish America and Brazil	..... (3)

**Political Science**

Poly Sci 1	Introduction to Political Science	... (3)
Poly Sci 2	American Government & Politics	.. (3)
Poly Sci 3	Comparative Politics	..... (3)
Poly Sci 14	Introduction to International Relations	..... (3)

**Social Science**

Soc Sci 52	Intro. to American Government	.... (3)
Soc Sci 69	Personal Finance	..... (3)

**Sociology**

Sociol 1	Principles of Sociology	..... (3)
Sociol 2	Contemporary Social Problems	.... (3)
Sociol 10	Sociology of Minority Groups	.... (3)
Sociol 33	Marriage and the Family	..... (3)

**SOIL AND WATER TECHNOLOGY**

Twenty-two units required for the major

I. Required courses for the major

Ag 32	Irrigation and Drainage	..... (3)
Ag 35	Fluid Power	..... (4)
Ag 37	Small Gasoline Engines	..... (3)
Ag 40	Soils	..... (3)
Ag 41	Fertilizers	..... (3)

II. Acceptable courses for the major (3 units from the following courses)

Ag 28	Heavy Equipment Operation and Maintenance	..... (5)
Ag 33A	Farm Power	..... (5)
Weld 31	Basic Welding	..... (5)
Chem 2A	Introduction to Chemistry	..... (4)
Engr 72	Surveying for Engineering Technology	..... (3)
WE Occ 80	Personal Efficiency	..... (4)
WE Occ 81	Motivation	..... (4)
WE Occ 82	Labor and the Economy	..... (4)
WE Occ 83	Laws Affecting Employees	..... (4)

**TEACHER AIDE**

Twenty-four units required for the major

I. Required courses for the major

TA 1	Introduction to Instructional Associate	..... (3)
TA 3/Psych 3	Personal & Social Adjustment	..... (3)
TA 4/ECE 4	Bilingual-Multicultural Curriculum and Instruction	..... (3)
TA 6/ECE 6	Language Development for Young Children	..... (3)
TA 8/ECE 8	Mathematics for Young Children	... (3)
TA 9	Field Experience	..... (3)
TA 20/ECE 20/ Psych 20	Developmental Psychology of Children	..... (3)
TA 24/ECE 24/ Psych 24	Creative Learning Experiences for Young Children	..... (3)

**TEACHER PREPARATION**

The Teacher Preparation and Licensing Law of 1970 (Ryan Act) provides for two types of teaching credentials, each permitting instruction in grades K-12. One is the MULTIPLE SUBJECT CREDENTIAL for teachers in a self-contained classroom as commonly practiced in California elementary schools. The other is the SINGLE SUBJECT CREDENTIAL for teachers responsible for only one subject as practiced in junior and senior high schools.

To satisfy the requirements for the **MULTIPLE SUBJECT CREDENTIAL**, the student must either pass an examination (National Teachers Examination — Commons Section) or complete an approved major. This major must cover 84 semester units with 21 units in each of the following areas: (1) English and Communications, (2) Mathematics and Science, (3) Social Science, (4) Humanities. Most universities have developed **LIBERAL STUDIES** majors which have been approved for this credential. The National Teachers Examination may be taken at any time that the student feels capable of passing it. Only passing scores are to be submitted. For those passing the examination, any degree major may be completed. In addition to the major, professional education courses including student teaching are required. A full credential requires 30 semester units after the B.A. degree.

To satisfy the requirements for the **SINGLE SUBJECT CREDENTIAL**, the individual must pass an examination or have a degree major in one of the areas listed below:

Agriculture	History	Mathematics
Art	Home Economics	Music
Business	Industrial Arts	Physical Education
English	Languages	Physical Science
Government	Life Sciences	Social Science

Other degree majors may be subsumed under these categories: e.g., Speech, Drama, Journalism under English. Check the university catalog for specific listings. A person would increase the possibilities for employment by passing several examinations in addition to his major. It is no longer possible to teach a "minor" subject. Professional education courses and student teaching are required and a full credential is earned by completion of a year past the B.A. degree.

**SPECIALIST CREDENTIALS**

These credentials require advanced preparation after the individual has earned a valid credential.

Early Childhood Education	Agriculture
Bilingual-Cross Cultural	Mathematics
Special Education including learning handicapped, educationally handicapped, mentally retarded, physically handicapped, speech and hearing disorders.	Reading

**SERVICES CREDENTIALS**

These also require advanced preparation after the individual has a valid teaching credential.

Pupil Personnel	Librarian
Health	Administrative

**LIBERAL STUDIES MAJOR AT IVC**

The Liberal Studies Major offers a general type of education that will enable the student to extend his/her background in the multiple subject groups of knowledge identified below.

The Liberal Studies Major in this catalog is recommended for students who plan to enter elementary education and transfer to San Diego State University. It meets the lower division requirements for the multiple subjects/diversified major as specified in the Ryan Act.

A minimum of 60 units, with a grade point average of 2.50, is needed to make formal application to the school of educa-

tion. Students planning to transfer to an institution other than SDSU must follow their catalog. See a counselor regarding this major.

Forty-five to fifty-nine units required for the major

- I. English (15 units required)
  - Eng 1A Reading and Composition ..... (3)
  - Eng 52 Introduction to Linguistics ..... (3)
  - Eng 50 Advanced Composition ..... (3)
  - Eng 42A OR World Literature ..... (3)
  - Eng 42B World Literature ..... (3)
  - Sp 1 Oral Communication ..... (3)
- II. Math and Science
  - A. Math (6 units required)
    - Math 10 AND Math for Elementary School Teachers ..... (3)
    - Math 310B (Take this course at SDSU) ..... (3)
    - OR
    - Math 3A AND Analytic Geometry and Calculus ..... (5)
    - Math 3B Analytic Geometry and Calculus . ] (5)
  - B. Biological Science (4 units required)
    - Bio 3 Principles of Biological Science ... (4)
    - Bot 1A General Botany ..... (4)
    - Bio 21 General Microbiology ..... (4)
  - C. Physical Science (3 or 4 units required)
    - Astron 21 Elementary Astronomy ..... (3)
    - Geog 1 Physical Geography ..... (3)
    - Geol 11 General Geology: An Introduction to Geology ..... (3)
    - Phys Sci 25 Introduction to Physical Science... (4)
  - D. One additional course required - select from areas B and C above or:
    - Anthro 1 Physical Anthropology ..... (3)
    - Chem 2A Introduction to Chemistry ..... (4)
    - Math 2 Advanced Algebra & Trigonometry ..... (5)
    - Math 12 Elementary Statistics ..... (3)
- III. Social Science
  - A. Global Perspective (3 units required)
    - Anthro 2 OR Cultural Anthropology ..... (3)
    - Geog 2 Cultural Geography ..... ] (3)
  - B. U.S. Organization (3 units required)
    - Econ 1 Principles of Economics ..... (3)
    - Econ 2 Principles of Economics ..... (3)
    - Hist 8A History of the Americas ..... (3)
    - Hist 8B History of the Americas ..... (3)
    - Hist 17A United States History ..... (3)
    - Hist 17B United States History ..... (3)
    - Poly Sci 1 Introduction to Political Science ... (3)
    - Poly Sci 2 American Government & Politics .. (3)
    - Sociol 1 Principles of Sociology ..... (3)
  - C. Individual Perspective (3 units required)
    - Psych 1A General Psychology ..... (3)
- IV. Humanities and Fine Arts
  - A. Values and Ethics (3 units required)
    - Phil 1A Introduction to Philosophy ..... (3)
    - Phil 1B Introduction to Philosophy ..... (3)
    - Phil 25 Religions of the Modern World .... (3)
  - B. Western Civilization (3 units required)
    - Art 3A History & Appreciation of Art ..... (3)

- Art 3B History & Appreciation of Art ..... (3)
- Dram Art 5A History of World Drama ..... (3)
- Dram Art 5B History of World Drama ..... (3)
- Hist 4A History of Western Civilization ..... (3)
- Hist 4B History of Western Civilization ..... (3)
- C. Art (3 units required)
  - Art 20A Drawing ..... (3)
  - Art 22A Design ..... (3)
- D. Music (3 units required)
  - Mus 7 Introduction to Music Foundations ..... (3)
- E. Humanities Electives (3 or 4 units required) - select from additional courses in areas A, B or C above or:
  - Anthro 4 California Indians ..... (3)
  - Art 30A Introduction to Art ..... (2)
  - Art 30B Introduction to Art ..... (2)
  - Mus 30 Introduction to Music Literature and Listening ..... (3)
  - Fr 1 Elementary French ..... (4)
  - Fr 2 Elementary French ..... (4)
  - Fr 3 Intermediate French ..... (4)
  - Fr 4 Intermediate French ..... (4)
  - Span 1 Elementary Spanish ..... (4)
  - Span 2 Elementary Spanish ..... (4)
  - Span 3 Intermediate Spanish ..... (4)
  - Span 4 Intermediate Spanish ..... (4)
  - Span 20A Bilingual Spanish ..... (4)
  - Span 20B Bilingual Spanish ..... (4)
  - Span 21 Intermediate Bilingual Spanish .... (4)
  - Span 22 Advanced Bilingual Spanish ..... (4)
- V. Health Education & Physical Education (6 units required)
  - HE 1 Health Education ..... (3)
  - PE 61 Physical Education in the Elementary School ..... (3)

**WATER TREATMENT TECHNOLOGY**

Twenty-three units required for the major

- I. Required courses for the major
  - WT 1 Water Treatment Plant Operator I .. (4)
  - WT 2 Water Treatment Plant Operator II . (4)
  - WT 6 Computational Procedures for Treatment Plant Operator I ..... (3)
  - WT 9 Waste Water Treatment I ..... (4)
  - WT 10 Waste Water Treatment II ..... (4)
  - WT 11 Waste Water Treatment III ..... (4)
- II. Recommended courses for the major
  - Bus 3 Business Management ..... (3)
  - Bus 6 Management Concepts of Supervision ..... (3)
  - Bus 7 Human Relations in Management .. (3)
  - Chem 1A General Inorganic Chemistry ..... (5)
  - Chem 2A Introduction to Chemistry ..... (4)
  - WT 5 Water Borne Diseases ..... (3)

**WELDING TECHNOLOGY**

The practice of joining metals by welding is becoming more of a science every day. Imperial Valley College recognizes this and consequently has instituted a two-year Associate Degree program in Welding Technology. This program is designed to train technicians by giving the student ample laboratory welding practice along with related theory, plus a firm background in associated subjects such as mechanics and metal-fabricating techniques.

The welding facility consists of an indoor, air-conditioned laboratory equipped with oxy-acetylene, arc welders, Tig welders, Mig welders, and resistance welders.

Graduates from this program will find many opportunities for employment with aircraft industries, shipbuilding companies, construction crews, etc. The future is almost unlimited for the student with interests along these lines.

Twenty units required for the major

- I. Required courses for the major
  - Weld 31 Basic Welding ..... (5)
  - Weld 36A Advanced Welding ..... (5)
  - Weld 36B Advanced Welding ..... (5)
  - Weld 36C Advanced Welding - Welder Certification and Blueprint Reading .. (5)

# CERTIFICATE PROGRAMS

**FIELD ARCHAEOLOGY Certificate Program**

Twenty-four units and 100 hours of field work required for the certificate

- I. Required courses for the certificate
    - Anthro 1 Physical Anthropology ..... 3
    - Anthro 2 Cultural Anthropology ..... 3
    - Anthro 3A Introduction to Archaeological Site Surveying ..... 3
    - Anthro 3B Introduction to Archaeological Excavation ..... 3
    - Anthro 3C Advanced Archaeological Survey ... 3
    - Anthro 3D Advanced Archaeological Excavation ..... 3
    - Anthro 4 California Indians ..... 3
- Total Units ..... 21

Three units to be selected from the following courses:

- Bio 3 Principles of Biological Science .... 4
  - Geog 1 Physical Geography ..... 3
  - Geol 1A Physical Geology ..... 3
  - Geol 10 Life of the Past: An Introduction to Paleontology ..... 3
  - Geol 13 Geology of California ..... 3
  - Zool 1A General Zoology ..... 4
  - Zool 1B General Zoology ..... 4
- Total Units ..... 24-25

**AUTO BODY REPAIR AND PAINTING Certificate Program**

Twenty-four to 27 units are required to complete the Auto Body Certificate Program.

- Auto Tech 50 Shop Mathematics, if required ..... 3
  - Auto Body 70 Auto Body Repairing & Painting .... 5
  - Auto Body 71 Advanced Auto Body Repair and Painting ..... 5
  - Auto Body 72 Auto and Light Truck Major Collision Repairing ..... 5
  - Auto Tech 53 Brakes and Suspension ..... 3
  - Weld 31 Basic Welding ..... 5
- Total Units ..... 24-27

**CERTIFICATE PROGRAMS**

The following courses may be substituted for any of the above required courses except Auto Body 70 and Auto Body 71:

Auto Tech 54	Electrical and Fuel Systems	..... 3
Auto Tech 58	Automotive Air-Conditioning	..... 3

**AUTOMOTIVE TECHNOLOGY  
Certificate Program**

Thirty-one to 34 units required for the certificate

**I. Required courses for the certificate**

Auto Tech 50	Shop Math (if required)	..... 3
Auto Tech 51	Engine Technology, or equivalent	.. 5
Auto Tech 52	Manual Transmissions and Power Trains	..... 3
Auto Tech 53	Brakes and Suspension	..... 3
Auto Tech 54	Carburetors, Fuel and Exhaust Systems	..... 3
Auto Tech 55	Advanced Gasoline Engines	..... 5
Auto Tech 60	Electrical, Starting, Charging, Ignitions & Related Electrical Systems	..... 3

**II. Acceptable courses for the certificate**

Auto Tech 56	Diagnostics	..... 3
Auto Tech 57	Fluid Power	..... 4
Auto Tech 58	Automotive Air-Conditioning	..... 3
Auto Tech 59	Small Gasoline Engines	..... 3
Auto Tech 61	Automatic Transmissions	..... 5
Auto Tech 63	Diesel Engine Fundamentals	..... 5
Auto Tech 65	Basic Machine Shop Technology	... 3
Weld 31	Basic Welding	..... 5

**BANKING  
Certificate Programs**

**ADMINISTRATIVE CERTIFICATE IN  
BANK OPERATIONS**

Bus 1A	Principles of Accounting	..... 4
Bus 1B	Principles of Accounting	..... 4
Bus 6	Management Concepts of Supervision	..... 3
Bus 7	Human Relations in Management	... 3
Bus 60	Principles of Bank Operations	..... 3
<b>Select any two of the following electives</b>		
Bus 5A	Business Law	..... 3
Bus 42	Business Correspondence	..... 3
Econ 1	Principles of Economics	..... 3
Sp 1	Oral Communication	..... 3
		Total Units ..... 23

**CREDIT ADMINISTRATION CERTIFICATE  
IN BANKING**

Bus 1A	Principles of Accounting	..... 4
Bus 1B	Principles of Accounting	..... 4
Bus 60	Principles of Bank Operations	..... 3
Bus 61	Analysis of Financial Statements	... 3
Bus 62	Installment Credit	..... 3
<b>Select any two of the following electives</b>		
Bus 5A	Business Law	..... 3
Bus 7	Human Relations in Management	... 3
Bus 42	Business Correspondence	..... 3

Bus 63	Financing Business Enterprises	..... 3
Bus 64	Agricultural Finance	..... 3
Econ 1	Principles of Economics	..... 3
Sp 1	Oral Communication	..... 3
		Total Units ..... 23

**GENERAL CERTIFICATE IN BANK SERVICES\*\*\***

Bus 5A	Business Law	..... 3
Bus 10A	Practical Bookkeeping**	..... 3
Bus 21AB	Proficiency—Exit Typewriting*	...2-2
Bus 23	Office Machines	..... 3
Bus 40	Grammar and Usage	..... 3
Bus 60	Principles of Bank Operations	..... 3

**Select any two of the following electives**

Bus 7	Human Relations in Management	... 3
Bus 39	Office Procedures	..... 3
Bus 41	Essentials of Business Correspondence	..... 2
Bus 50	Introduction to Data Processing	... 3
Sp 1	Oral Communication	..... 3
		Total Units ..... 22-23

\*Minimum skill level 40 net words per minute required to qualify for certificate. If skill level attained in Bus 21A, student is excused from Bus 21B.

\*\*Bus 1A will be substituted if student has completed 1 year of high school bookkeeping.

\*\*\*Designed for bank tellers, file clerks, bookkeepers, etc. Not intended for secretarial staff members.

**SECRETARY CERTIFICATE IN BANK SERVICE**

Bus 5A	Business Law	..... 3
Bus 21AB	Proficiency—Exit Typewriting*	...2-2
Bus 32AB	Dictation and Transcription Lab**	...3-3
Bus 40	Grammar and Usage	..... 3
Bus 41 OR	Essentials of Business Correspondence	..... 2 or 3
Bus 42	Business Correspondence	..... 2 or 3
Bus 60	Principles of Bank Operations	..... 3

**Select any two of the following electives**

Bus 7	Human Relations in Management	... 3
Bus 23	Office Machines	..... 3
Bus 39	Office Procedures	..... 3
Bus 50	Introduction to Data Processing	... 3
Sp 1	Oral Communication	..... 3
		Total Units ..... 22 or 23

\*Minimum skill level of 60 net words per minute required to qualify for certificate. If skill level attained in Bus 21A student is excused from Bus 21B.

\*\*Minimum skill level of 90 words per minute required to qualify for certificate. If attained in Bus 32A, student is excused from Bus 32B.

**BUSINESS  
Certificate Program**

It is highly recommended that WE GEN 70/WE OCC 80, WE GEN 71/WE OCC 81, WE GEN 72/WE OCC 82, and WE GEN 73/WE OCC 83 be completed at Imperial Valley College to provide expanded experience for the following certificate programs.

**Office Technician:  
(Receptionist - File Clerk - Small Business Records)**

Bus 10A	Practical Bookkeeping	..... 3
Bus 21AB	Proficiency-Exit Typewriting	.....2-2 (40 wpm skill level required)

**CERTIFICATE PROGRAMS**

Bus 22	Word Processing .....	3
Bus 23	Office Machines .....	3
Bus 24	Records Management .....	3
	Business Electives .....	8
Math 51	Basic Mathematics (if required) .....	3
Eng 51 OR	The Communication Process .....	3
Eng 3B	Writing Fundamentals .....	
	Total Units .....	25-28

**Clerk Typist:**

Bus 21AB	Proficiency-Exit Typewriting .....	2-2 (50 wpm skill level required)
Bus 22	Word Processing .....	3
Bus 23	Office Machines .....	3
Bus 24	Records Management .....	3
Bus 39	Office Procedures .....	3
	Business Electives .....	8
Math 51	Basic Mathematics (if required) .....	3
Eng 51 OR	The Communication Process .....	3
Eng 3B	Writing Fundamentals .....	
	Total Units .....	25-28

**Secretary Stenographer:**

Bus 21AB	Proficiency-Exit Typewriting .....	2-2 (60 wpm skill level required)
Bus 22	Word Processing .....	3
Bus 23	Office Machines .....	3
Bus 24	Records Management .....	3
Bus 32AB	Dictation & Transcription Lab .....	3-3 (90 wpm skill level required)
Bus 39	Office Procedures .....	3
Bus 40	Grammar & Usage .....	3
Bus 41 OR	Essentials of Bus. Corres. ....	2 or 3
Bus 42	Business Correspondence .....	
Eng 2B OR	Basic English Composition .....	3
Eng 1A	Reading and Composition .....	
Math 51	Basic Mathematics (if required) .....	3
	Total Units .....	25-32

**Bookkeeper-Technician:**

Bus 10A	Practical Bookkeeping .....	3
Bus 10B	Practical Bookkeeping .....	3
Bus 21AB	Proficiency-Exit Typewriting .....	2-2 (40 wpm skill level required)
Bus 23	Office Machines .....	3
Bus 24	Records Management .....	3
	Business Electives .....	6
Math 51	Basic Mathematics (if required) .....	3
Eng 51 OR	The Communication Process .....	3
Eng 3B	Writing Fundamentals .....	
	Total Units .....	23-26

**CARPENTRY  
Certificate Program**

Carp 1	The Apprenticeship and Math .....	3
Carp 2	Pre-job and Plot Planning .....	3
Carp 3	Rough Framing .....	3
Carp 4	Roof Framing .....	3
Carp 5	Interior and Exterior Finish .....	3
Carp 6	Stair Building .....	3
Carp 7	Concrete and Forms .....	3
Carp 8	Heavy Timber Construction and Welding .....	3
	Total Units .....	24

**COSMETOLOGY  
Certificate Program**

Cos 50A	Introduction to Cosmetology .....	10
Cos 50B	Introduction to Cosmetology .....	10
Cos 52A	Intermediate Cosmetology .....	10
Cos 52B	Intermediate Cosmetology .....	10
Cos 54A	Advanced Cosmetology .....	5
	Total Units .....	45

**EARLY CHILDHOOD EDUCATION  
Certificate Program**

ECE 20/Psych 20	Developmental Psychology of Children .....	3
ECE 21/Psych 21	Early Childhood Socialization: Children, Family & Community ...	3
ECE 22/Psych 22	Principles of Child Development and Observation .....	3
ECE 23	Early Childhood Developmental Curriculum .....	3
ECE 25	Field Experience .....	3
	Total Units .....	15

**ELECTRONICS PROGRAM  
Certificate Program**

Electronics 1A	Basic Electronics .....	4
Electronics 1B	Electronics Assembly & Fabrication ..	3
Electronics 2	Transistors & Semi-Conductors .....	5
Electronics 5	Practical Digital Electronics .....	3
	Total Units .....	15

**EMERGENCY MEDICAL TECHNICIAN  
Certificate Program**

EMT 1/A	Emergency Medical Technician 1/ Ambulance .....	5.5
	Total Units .....	5.5

**FIRE SCIENCE  
Certificate Program**

Fire Sci 60	Introduction to Fire Technology ....	3
Fire Sci 61	Fundamentals of Fire Prevention ....	3
Fire Sci 62	Fire Protection Equipment and Systems .....	3
Fire Sci 63	Fundamentals of Fire Behavior and Control .....	3
Fire Sci 64	Fundamentals of Fire Protection ....	3
Fire Sci 65	Fundamentals of Personal Fire Safety and Emergency Action .....	3
Math 51	Basic Mathematics, or equivalent ...	3
	Total Units .....	18-21

**GERONTOLOGY  
Certificate Program**

Twenty-three units required for the certificate

Geron 1	Fundamentals of Aging .....	3
Geron 2	Sociology of Aging .....	3
Geron 3	Psychology of Aging .....	3
Geron 4	Biology of Aging .....	3
Geron 5	Aging and the Quality of Life .....	3
Geron 11	Gerontology Practicum .....	2
Psych 1A	General Psychology .....	3
Sociol 1	Principles of Sociology .....	3
	Total Units .....	23

**CERTIFICATE PROGRAMS**

**GOVERNMENTAL MANAGEMENT—PUBLIC  
SERVICE ADMINISTRATION  
Certificate Program**

Bus 8	Personnel Management .....	3
Bus 70	Fundamentals of Governmental Management .....	3
Bus 71	State and Local Government Management .....	3
Bus 72	Finance Management .....	3
<b>Select any three of the following courses</b>		
Bus 6	Management Concepts of Supervision .....	3
Bus 7	Human Relations in Management ...	3
Bus 50	Introduction to Data Processing ...	3
WE Occ 82 OR	Labor and the Economy	] 4
WE Occ 83	Laws Affecting Employees .....	
		Total Units .....

**GRAPHIC ARTS — MULTI-MEDIA  
Certificate Program**

Fourteen units required

GA 10	Graphic Communications I .....	2
GA 11	Graphic Communications II .....	3
GA 12	Composition, Layout and Paste-up .	3
GA 22 OR	Photography and Platemaking	] 3
GA 20	Offset Printing I .....	
		Total Units .....

**GRAPHIC ARTS — PRINTING  
Certificate Program**

Eleven units required

GA 20	Offset Printing I .....	3
GA 21	Offset Printing II .....	3
GA 22	Photography and Platemaking .....	3
GA 23	Bindery, Cutting & Distribution .....	2
		Total Units .....

**HEALTH AIDE  
Certificate Program**

Required courses for all certificates:

Psych 5	Psychology of Effective Behavior ...	3
		(or Psych 1A, if eligible)
Eng 51	The Communication Process .....	3
		(or Eng 2B, or Eng 1A, if eligible)
PE	Physical Education, if required .....	1
		6-7

and

Health Aide course according to certificate desired:

HA 15A OR	Hospital Nursing Assistant	] 9
HA 15B OR	Community Health Aide	
HA 15C OR	Developmental Disability/Mental Retardation Aide	
HA 15D	Mental Health Aide .....	
		Total Units .....

**HEAVY MACHINERY  
Certificate Program**

Total of 34 units required for the certificate

Required courses:

HM 35	Heavy Equipment Operation and Maintenance .....	5
Ag 33A	Farm Power .....	5
Ag 33B	Farm Power .....	5
Ag 35	Fluid Power .....	4
Ag 37	Small Gasoline Engines .....	3
Auto Tech 52	Brakes and Suspension .....	3
		25

and nine (9) units to be selected from the following courses:

Ag 50	Shop Mathematics .....	3
Weld 31	Basic Welding .....	5
WE Gen 70	Personal Efficiency .....	3
WE Gen 71	Motivation .....	3
WE Gen 72	Labor and the Economy .....	3
WE Gen 73	Laws Affecting Employees .....	3
		Total Units .....

**HUMAN RELATIONS  
Certificate Program**

Areas of emphasis: Community Mental Health Worker, Counseling, School, Social Services, Personnel, Employment Counseling and Supervision

Twenty-four units required for the certificate

I. Required courses for the certificate

Psych 1A	General Psychology .....	3
Psych 3/TA 3	Psychology of Personal and Social Adjustment .....	3
Psych 9/HR 9	Interviewing and Counseling .....	3
Psych 11AB/ HR 11AB	Practicum .....	3-3
Sociol 1	Principles of Sociology .....	3

II. With the approval of his/her counselor and the Division Chairman, the student will select a minimum of nine units (depending on areas of emphasis) from the following courses. It is considered advisable for students in certain areas of emphasis to take more than nine units from the list below.

Anthro 2	Cultural Anthropology .....	3
Bus 6	Management Concepts of Supervision .....	3
Bus 7	Human Relations in Management ...	3
Bus 50	Introduction to Data Processing ...	3
Bus 79	Public Relations Techniques .....	3
HR 8/Psych 8	Personal & Career Development ...	3
HR 10/Psych 10	Small Group Leadership .....	3
Jrn 3	Mass Communications .....	3
Psych 1B	Advanced General Psychology .....	3
Psych 2	Intro. to Physiological Psychology ..	3
Psych 5	Psychology of Effective Behavior ...	3
Psych 12/ Bus 26/Math 12	Elementary Statistics .....	3
Psych 14	Abnormal Psychology .....	3
Psych 15	Social and Psychological Dynamics of Drug Use .....	3
Psych 16	The Psychology of Interpersonal Relationships .....	3
Psych 17	Social Psychology .....	3
Psych 20	Developmental Psychology of Children .....	3



**CERTIFICATE PROGRAMS**

Psych 26/ ECE 26	Psychology of Parenthood .....	3
Psych 30	Psychology of Adolescence .....	3
Psych 35	Developmental Psychology: Conception to Death .....	3
Psych 40	Psychology of Crisis Counseling ...	3
Psych 46/ LE 46	The Mentally Ill, Alcoholic, Drug Addict, and the Law .....	3
Sociol 2	Contemporary Social Problems .....	3
Sociol 41/ LE 41	Mass Sociology and Collective Behavior .....	3
	<b>Total Units .....</b>	<b>24</b>

**LAW ENFORCEMENT  
Certificate Program**

LE 21	Intro. to Administration of Justice ..	3
LE 33	Concepts of Criminal Law .....	3
LE 35	Legal Aspects of Evidence .....	3
LE 36	Principles and Procedures of the Justice System .....	3
LE 37	Juvenile Control .....	3
LE 38	Community Relations .....	3
	<b>Total Units .....</b>	<b>18</b>

**LEGAL ASSISTANT  
Certificate Program**

Bus 5A	Business Law .....	3
LA 21	Research and Criminal Law .....	3
LA 22	Civil Procedures and Family Law ...	3
LA 23	Civil Discovery and Torts .....	3
LA 24	Corporations and Bankruptcy .....	3
LA 25	Real Estate Law for Legal Assistants .....	3
LA 26	Wills-Trusts-Probate .....	3
	<b>Total Units .....</b>	<b>21</b>

**BASIC LIBRARY TECHNICIAN  
Certificate Program**

LT 51	Introduction to Library Services ....	3
LT 52	Support for Technical Services .....	3
LT 53	Support for Public Services .....	3
LT 54	Intro. to Audio-Visual Services .....	3
LT 55	Cataloging and Classifying .....	3
	<b>Total Units .....</b>	<b>15</b>

**MARKETING—SALES TECHNOLOGY  
Certificate Program**

Eighteen units required for the certificate

Bus 2	Introduction to Business .....	3
Bus 4	Principles of Marketing .....	3
Bus 13	Applied Business Law .....	3
Bus 14	Practical Salesmanship .....	3

Six units to be selected from the following courses:

Bus 1A	Principles of Accounting .....	4
Bus 10A	Practical Bookkeeping .....	3
Bus 21AB	Proficiency—Exit Typewriting .....	2-2
Bus 23	Office Machines .....	3
Bus 65	Retail Sales Checking .....	2
Econ 1	Principles of Economics .....	3
	<b>Total Units .....</b>	<b>18</b>

**RECREATION  
Certificate Program**

Rec 70	Introduction to Leisure .....	3
Rec 72	Outdoor Recreation .....	3
Rec 73	Recreation for Special Groups .....	4
Rec 74	Intro. to Community Recreation ....	3

Two or three units to be selected from the following courses:

Art 22A	Design .....	3
PE 59AB	Sports Officiating, Men .....	3-3
PE 60AB	Sports Officiating, Women .....	3-3
PE 61	Physical Education in the Elementary Schools .....	3
PE 62AB	Physical Education for Special Olympics .....	3-3
Rec 71	Social Recreation .....	3
PE 6	Lifesaving .....	2

Two or three units to be selected from the following courses:

PE 3ABCD	Physical Fitness, Women .....	1-1-1-1
PE 4ABCD	Badminton, Coed .....	1-1-1-1
PE 5ABCD	Swimming, Coed .....	1-1-1-1
PE 8ABCD	Bowling, Coed .....	1-1-1-1
PE 10ABCD	Team Sports .....	1-1-1-1
PE 11ABCD	Volleyball, Coed .....	1-1-1-1
PE 12ABCD	Tennis, Coed .....	1-1-1-1
PE 14ABCD	Recreational Games, Coed ....	1-1-1-1
PE 15ABCD	Figure Control for Women .....	1-1-1-1
PE 17ABCD	Physical Fitness, Men .....	1-1-1-1
PE 20ABCD	Softball, Coed .....	1-1-1-1
PE 23ABCD	Basketball for Women .....	1-1-1-1
PE 24ABCD	Basketball for Men .....	1-1-1-1
PE 29ABCD	Jazz Dance, Coed .....	1-1-1-1
	<b>Total Units .....</b>	<b>18</b>

**REHABILITATION TECHNICIAN FOR THE  
PHYSICALLY LIMITED  
Certificate Program**

Twenty-five to twenty-six units required for the certificate

I. Required courses for the certificate

PL 1/Psych 27/Understanding Exceptional ECE 27	Students .....	3
PL 2AB	Practicum Experience to Work with the Physically Limited Person ...	2-2
Psych 1A OR Psych 5	General Psychology Psychology of Effective Behavior ...	3
Eng 51 OR Eng 1A	The Communication Process Reading and Composition .....	

One of the following options must be completed. Additional units may be taken from other options and/or Area II (Acceptable courses for the certificate) to total 14-15 units.

Option A

PL 20	Literary Braille .....	3
PL 21	Psychology of Physical Disabilities .	3

Option B

PL 10	Beginning Communication with the Deaf .....	4
PL 11	Intermediate Communication with the Deaf .....	4

Option C

PL 33	Introduction to Audiology .....	3
PL 34	Audiometry and Hearing Conservation .....	3

Option D

HA 15A OR	Hospital Nursing Assistant	] 9
HA 15B OR	Community Health Aide	
HA 15C	Developmental Disability/Mental Retardation Aide	

II. Acceptable courses for the certificate

PE 62AB	Physical Education for Special Olympics	3-3
PL 12	Advanced Communication with the Deaf	3
PL 13AD	Communication with the Deaf in the College Classroom	1-1-1-1
PL 30	Intro. to Speech & Language	3
PL 31	Interview and Testing Techniques for Speech & Hearing Problems	3
PL 32	Behavior Modification Techniques for Speech & Hearing Pathology	3
PL 40	Introduction to Physical Therapy	3
PL 41	Intro. to Occupational Therapy	3
Psych 3	Psychology of Personal and Social Adjustment	3
Psych 9	Interviewing and Counseling	3
Rec 73	Recreation for Special Groups	4
Sociol 1	Principles of Sociology	3
Sp 1	Oral Communication	3
Sp 30	Voice & Articulation Development	3

**TEACHER AIDE  
Certificate Program**

Twenty-four units required for the certificate

I. Required courses for the certificate

TA 1	Intro. to Instructional Associate	3
TA 3/Psych 3	Personal and Social Adjustment	3
TA 4/ECE 4	Bilingual-Multicultural Curriculum and Instruction	3
TA 6/ECE 6	Language Development for Young Children	3
TA 8/ECE 8	Mathematics for Young Children	3
TA 9	Field Experience	3
TA 20/ECE 20/ Psych 20	Developmental Psychology of Children	3
TA 24/ECE 24	Creative Learning Experiences for Young Children	3

**VOCATIONAL NURSING  
Certificate Program**

HT 1	Introduction to Health Sciences	2
Anat 6	Human Anatomy & Physiology for LVN's	3
Psych 1A	General Psychology	3
Psych 16	Interpersonal Relationships	3
Psych 35	Developmental Psychology: Conception to Death	3
NS 1A	Introduction to Patient Care I	4
NS 1B	Introduction to Patient Care II	4
NS 1C	Pharmacology I	1.5
NS 2A	Maternity Cycle	5.5
NS 2B	Common Health Problems I	5.5
NS 2C	Pharmacology II	2
NS 3A	Common Health Problems II	6.5
NS 3B	Common Health Problems III	6.5
NS 3C	Patient Care Management	.5
	<b>Total Units</b>	<b>50</b>

**WATER TREATMENT TECHNOLOGY  
Certificate Program**

WT 1	Water Treatment Plant Operator I	4
WT 2	Water Treatment Plant Operator II	4
WT 6	Computational Procedures for Treatment Plant Operator I	3
WT 9	Waste Water Treatment I	4
WT 10	Waste Water Treatment II	4
WT 11	Waste Water Treatment III	4
	<b>Total Units</b>	<b>23</b>

**WELDING  
Certificate Program**

One of the following four patterns of study will fulfill requirements for a certificate in Welding Technology.

**Pattern One**

(Recommended for Agriculture and Agricultural Services)

Weld 31	Basic Welding	5
Weld 36A	Advanced Welding	5
AE 20	Alcohol Fuel Production	3
	Eight units selected from agriculture courses	8
	<b>Total Units</b>	<b>21</b>

**Pattern Two**

(Recommended for air conditioning mechanics and construction personnel)

Weld 36A	Advanced Welding	5
Weld 36B	Advanced Welding	5
AE 10	Practical Methods in Solar Energy	3
Ag 36	Agriculture Construction	3
Ag 38	Power Electricity	3
	<b>Total Units</b>	<b>19</b>

**Pattern Three**

(Recommended for welders with a future in general service industries)

Weld 31	Basic Welding	5
Weld 36A	Advanced Welding	5
Auto Tech 65	Basic Machine Shop Technology	3
	Eight units selected from agriculture and/or automotive technology courses	8
	<b>Total Units</b>	<b>21</b>

**Pattern Four**

(Recommended for the experienced welder who wishes to advance his/her general capabilities in welding and fabrication processes)

Weld 36B	Advanced Welding	5
Weld 36C	Advanced Welding - Welder Certification and Blueprint Reading	5
AE 20	Alcohol Fuel Production	3
Engr 21	Technical Drawing	3
Weld 50	Shop Mathematics	3
	<b>Total Units</b>	<b>19</b>

**OCCUPATIONAL WORK EXPERIENCE  
Certificate Program**

Twenty-eight units required

WE Occ 80	Personal Efficiency	4
WE Occ 81	Motivation	4
WE Occ 82	Labor and the Economy	4
WE Occ 83	Laws Affecting Employees	4

Twelve units from the student's planned course of occupational training as approved by the Dean of Vocational-Technical Education.

**Total Units** ..... 28

INDEX

<b>A</b>		Credentials, Teaching .....	83
Absence .....	20	Credit by Examination .....	19
Academic Dismissal .....	21	Credit for Upper Division Course Work .....	19
Academic Probation .....	20	Credit Classes .....	18
Academic Renewal .....	19	Curricula, Occupational .....	24
Accreditation .....	16	<b>D</b>	
Activities, Student .....	16	Deadline Dates .....	5
Administration .....	6	Degrees .....	15
Admission .....	17	Dismissal Policies .....	21
College Transfers .....	17	Directors and Coordinators .....	7
Foreign Students .....	17	Division Chairpersons .....	7
High School Graduates .....	17	Dramatic Art .....	35
Non-Graduates of High School .....	17	<b>E</b>	
Out-of-State Students .....	17	Early Childhood Education .....	35
Special High School Students .....	17	Economics .....	36
Advanced Placement, Nursing .....	19, 55	Education (not a major) .....	36
Affiliations, Institutional .....	15	Education, Teacher Preparation .....	83
Affirmative Action Policy .....	17	Electricity .....	36
Agriculture .....	25	Electronics .....	36
Alpha Gamma Sigma .....	15	Emergency Medical Technician .....	36
Alternate Energy .....	27	Emeritus Faculty .....	11
Anatomy .....	27	Engineering .....	37
Anthropology .....	27	English .....	38
Art .....	28	Enrollment, Concurrent High School and College .....	14
Assistance, Financial .....	15	Entrance Examinations .....	17
Associate Degree Nursing .....	56	Environmental Science .....	41
Associate in Arts Degree .....	15, 21	Evening College .....	14
Associate in Science Degree .....	15, 21	Expenses .....	15
Associated Students .....	16	Extension Courses, Credit for .....	23
Astronomy .....	29	External Campus .....	14
Athletics .....	16	<b>F</b>	
Courses .....	59	Facilities .....	12
Intercollegiate .....	16	Faculty .....	8
Attendance and Automatic Withdrawals .....	20	Faculty, Emeritus .....	11
Automotive Body and Paint .....	29	Family Educational Right & Privacy Act of 1974 .....	17
Automotive Technology .....	29	Fees .....	15
Awards, Scholarship .....	15	Financial Assistance .....	15
<b>B</b>		Fire Science .....	41
Biology .....	30	Food Services .....	42
Board of Trustees .....	6	Foreign Students .....	17
Bookstore .....	16	French .....	42
Botany .....	30	<b>G</b>	
Business .....	30	General Education .....	13, 22
<b>C</b>		Requirements at IVC .....	21
Calendar .....	4	Requirements for California State Colleges .....	24
California State Colleges .....	24	Requirements for University of California .....	24
Carpentry .....	33	Geography .....	44
Certificate Programs .....	24, 85-90	Geology .....	44
Chairpersons, Division .....	7	German .....	44
Changes in the Catalog .....	21	Gerontology .....	45
Charges .....	16	Grade Points .....	19
Chemistry .....	34	Grade Reports, Semester .....	20
Class Schedules, Change in .....	18	Grades .....	18
College Center .....	16	Grading System .....	18
Competency, State Requirement .....	22	Graduation Honors .....	15
Construction Inspection .....	34	Graduation Petition .....	21
Cooperative Work Experience .....	14, 68	Graduation Requirements .....	21
Correspondence & Extension Courses, Credit for .....	23	Grants .....	15
Cosmetology .....	34	Graphic Arts .....	45
Counseling and Guidance Services .....	16	Grievance Procedure .....	20
Courses of Instruction .....	25	Guidance Services .....	16
Courses, Types .....	14		

INDEX

**H**

Health Aide ..... 45

Health Education ..... 46

Health Technologies ..... 47

Hearing Process ..... 20

Heavy Machinery ..... 47

High School, Attendance of Student ..... 14

Honors ..... 14

    Summer ..... 14

    Vocational ..... 14

High School & College, Concurrent Enrollment ..... 14

History ..... 47

History of College ..... 12

Honor List, President's ..... 15

Honors Courses ..... 47

Honors, Graduation ..... 15

Honors Program for High School Students ..... 14

Honors, Scholastic ..... 15

Humanities ..... 48

Human Relations Courses ..... 48

**I**

Imperial Valley College ..... 12

Incompletes ..... 18

Individual Studies ..... 49

Institutional Affiliations ..... 15

Institutional Requirements ..... 22

Intercollegiate Sports ..... 59

Italian ..... 49

**J**

Journalism ..... 49

**L**

Lack of Progress, Dismissal ..... 21

Lack of Progress, Probation ..... 20

Language, Foreign Courses ..... 42, 44, 49, 64

Law Enforcement ..... 50

Learning Supportive Services ..... 16

Legal Assistant ..... 51

Liberal Studies Major ..... 84

Library ..... 12

Library Technician ..... 51

Limitations, Study List ..... 18

Location of College ..... 12

**M**

Majors ..... 21, 70-85

Major Requirements ..... 70-85

Mathematics ..... 52

    Entrance Examination ..... 17

    Graduation Requirements ..... 21

Media Center ..... 12

Medical, Emergency Technician ..... 36

Meyer Center ..... 12

Military Classes ..... 47, 57

Military Credit ..... 19

Mission and Goals, College ..... 13

Motion Picture Production ..... 53

Music ..... 53

**N**

Natural Science ..... 54

Night Classes ..... 14

Non-Discrimination Policy ..... 17

Nursing ..... 55

    Admission Policies ..... 55

    Application Policies ..... 55

    Progression Policies ..... 55

Nursing, Advanced Placement ..... 19, 55

Nursing, Associate Degree ..... 56

Nursing, Continuing Education ..... 46, 56

Nursing, Health Aide ..... 45

Nursing, Registered ..... 55

Nursing, Vocational ..... 55

**O**

Occupational Curricula ..... 24

Out-of-State Students ..... 17

**P**

Parking Permit ..... 16

Petition for Graduation ..... 21

Petition Process ..... 20

Philosophy ..... 57

Photography ..... 57

Physical Education ..... 57

    Exemptions ..... 21

    Requirements ..... 21

Physically Limited ..... 60

Physical Science ..... 61

Physics ..... 61

Physiology ..... 62

Political Science ..... 62

President's Honor List ..... 15

Probation ..... 20

Program

    Changes ..... 18

    Cooperative Work Experience ..... 14

    Evening College ..... 14

    External Campus ..... 14

    High School Students ..... 14

    Physically Limited ..... 15

    Transfer ..... 14

    Types ..... 14

Provisional Status ..... 20

Psychology ..... 62

**R**

Recreation ..... 63

Refund Policy ..... 16

Registered Nursing ..... 55

Regulations ..... 17

Repeated Classes ..... 19

Reports, Semester Grade ..... 20

Requirements for Four-Year Institution ..... 24

Requirements, Institutional ..... 22

Requirements, State Competency ..... 22

Residence Requirements ..... 17, 22

**S**

Scholarship .....	18
Grading System .....	18
Honors .....	15
Scholarships .....	15
Scholastic Dismissal .....	21
Scholastic Probation .....	20
Semester Grade Reports .....	20
Services Credentials .....	84
Snack Bar .....	16
Social Science .....	64
Society, Honor .....	15
Sociology .....	64
Spanish .....	64
Special Studies .....	66
Specialist Credentials .....	84
Speech .....	66
State Competency Requirements .....	22
Student	
Activities .....	16
Bookstore .....	16
Conduct .....	20
Study List Changes .....	18
Study List Limitations .....	18
Subject Area Requirements .....	22
Summer Session .....	25
Summer, High School Students .....	14

**T**

Teacher Aide .....	67
Teacher Preparation .....	83
Transcripts .....	17
Transfer Credit .....	24
Transfer Requirements .....	24
Trustees, Board of .....	6
Tuition .....	16

**U**

University of California .....	24
Upper Division Credit .....	19

**V**

Veterans	
Credit for Military Training .....	19
Vocational Curricula .....	24
Vocational, High School Students .....	14
Vocational Nursing .....	55
Vocational Work Experience Course .....	68
Voluntary Withdrawal .....	20

**W**

Water Treatment .....	67
Welding Technology .....	68
Withdrawal, Automatic .....	20
Withdrawal from College .....	20
Withdrawal Grades .....	18
Work Experience .....	14, 68
Work-Study Program .....	15

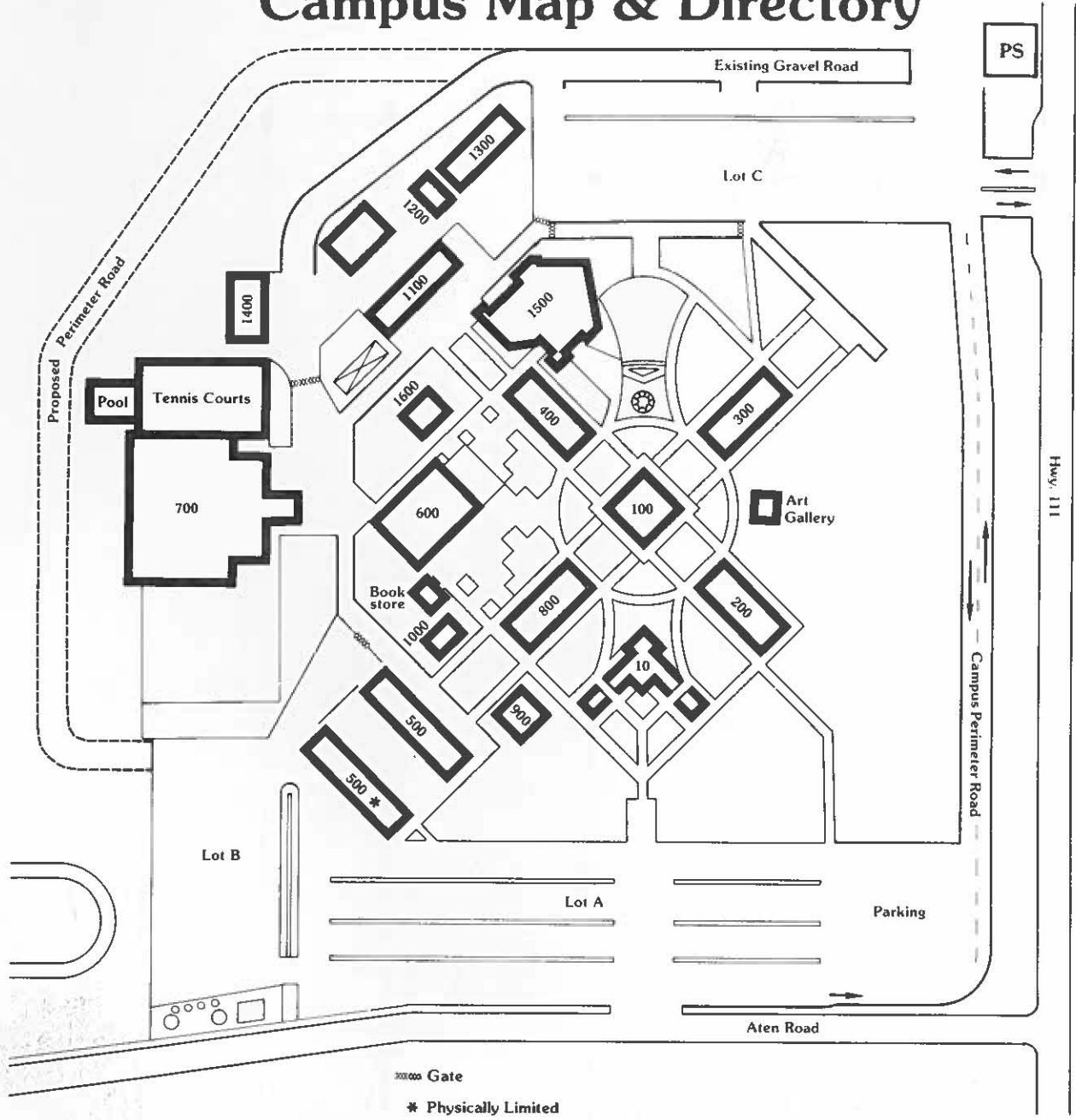
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Zoology .....	69
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# Imperial Valley College Campus Map & Directory



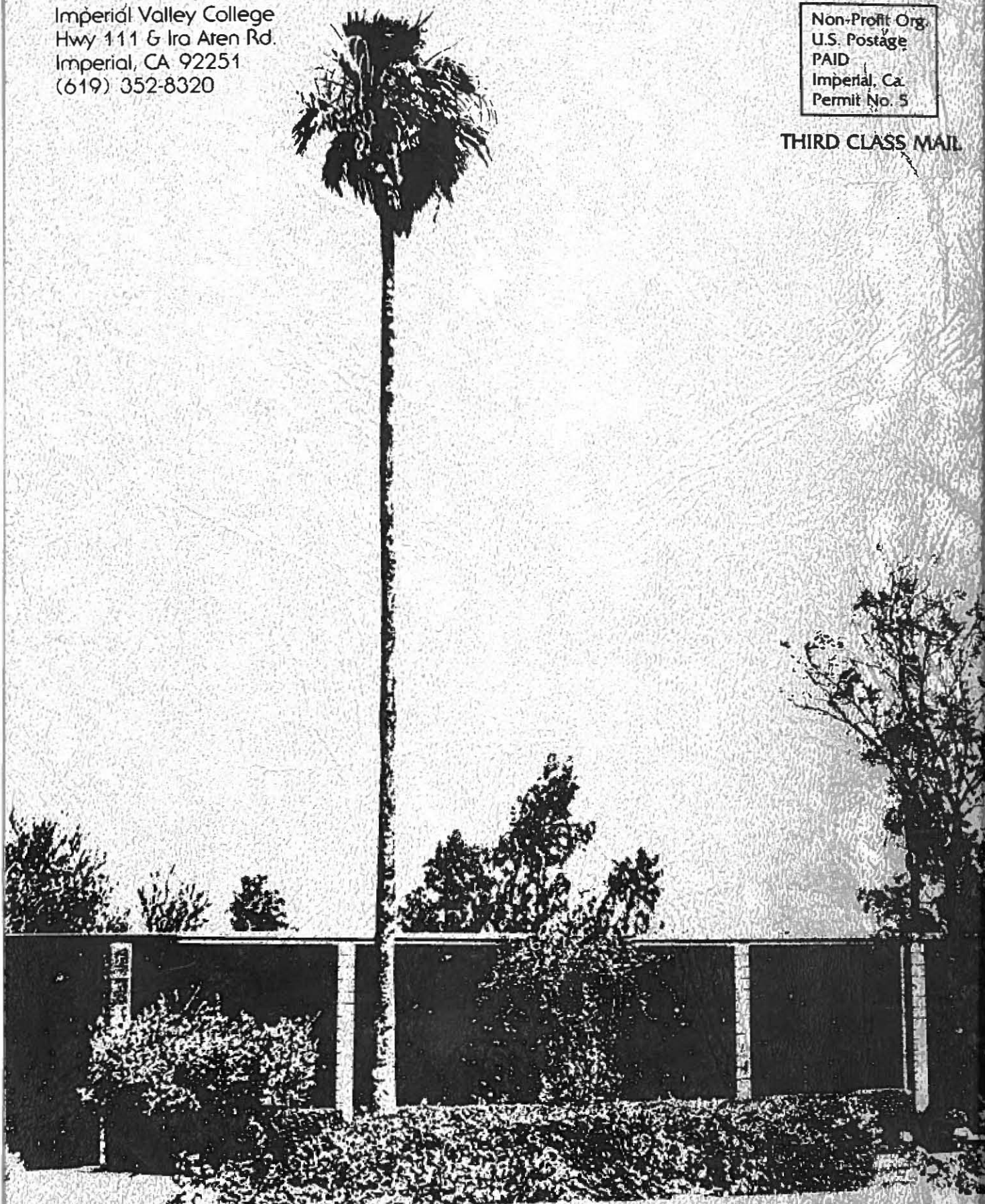
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\* Physically Limited

10	Administration	600	College Center	1200	Welding
100	Counseling Center	700	Gymnasium	1300	Agriculture
200	Social Science/English	800	Business/Nursing	1400	Maintenance
300	Fine Arts	900	Meyer Center	1500	Library/Media Center
400	Natural Science	1000	Student Life	1600	Modular Building
500	Engineering/Law Enforcement	1100	Auto Tech	PS	Pre-School

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