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

Highway 111 and Aten Road
IMPERIAL, CALIFORNIA 92251
Phone 352-8320
IMPERIAL COUNTY, CALIFORNIA
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

A MEMBER
of
California Community and Junior College Association

APPROVED
for
The Veterans Administration
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# IMPERIAL VALLEY COLLEGE
## 1981 - 1982 SCHOOL CALENDAR

### 1981

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Day</th>
<th>Event</th>
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<tbody>
<tr>
<td>September</td>
<td>1</td>
<td>Tuesday</td>
<td>Faculty Orientation/Registration</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Wednesday</td>
<td>Faculty Orientation</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Thursday</td>
<td>Faculty Orientation</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Tuesday</td>
<td>Fall Semester classes begin</td>
</tr>
<tr>
<td>November</td>
<td>11</td>
<td>Wednesday</td>
<td>Holiday (Veteran’s Day)</td>
</tr>
<tr>
<td></td>
<td>26-27</td>
<td>Thursday - Friday</td>
<td>Recess (Thanksgiving)</td>
</tr>
<tr>
<td>December</td>
<td>21</td>
<td>Monday</td>
<td>Recess (Christmas)</td>
</tr>
</tbody>
</table>

### 1982

<table>
<thead>
<tr>
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<th>Event</th>
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</thead>
<tbody>
<tr>
<td>January</td>
<td>1</td>
<td>Friday</td>
<td>Last day of recess (Christmas)</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Wednesday</td>
<td>Final Exams begin (Evening classes)</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>Thursday</td>
<td>Final Exams begin (Day classes)</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>Wednesday</td>
<td>Last day of Final Exams/Registration</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>Thursday</td>
<td>Faculty Orientation</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>Friday</td>
<td>Non-service day</td>
</tr>
<tr>
<td>February</td>
<td>1</td>
<td>Monday</td>
<td>Spring Semester classes begin</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Friday</td>
<td>Holiday (Lincoln’s Birthday)</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Monday</td>
<td>Holiday (Washington’s Birthday)</td>
</tr>
<tr>
<td>April</td>
<td>5-9</td>
<td>Monday - Friday</td>
<td>Recess (Spring)</td>
</tr>
<tr>
<td>May</td>
<td>31</td>
<td>Monday</td>
<td>Holiday (Memorial Day)</td>
</tr>
<tr>
<td>June</td>
<td>3</td>
<td>Thursday</td>
<td>Final Exams begin (Evening classes)</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Friday</td>
<td>Final Exams begin (Day classes)</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Thursday</td>
<td>Last day of Final Exams</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Friday</td>
<td>Non-service day</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Saturday</td>
<td>Graduation</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Monday</td>
<td>Summer School begins (If offered)</td>
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</tbody>
</table>
# DEADLINE DATES

## IMPERIAL VALLEY COLLEGE

### DEADLINE DATES

#### FALL SEMESTER 1981

<table>
<thead>
<tr>
<th>Month</th>
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<tbody>
<tr>
<td>September</td>
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<td>September</td>
<td>8</td>
<td>Tuesday</td>
<td>First Day of Classes</td>
</tr>
<tr>
<td>September</td>
<td>18</td>
<td>Friday</td>
<td>Last Day to Add or Register (End of 2nd Week)</td>
</tr>
<tr>
<td>September</td>
<td>28</td>
<td>Monday</td>
<td>First Census Day (Monday of 4th Week) Last Day to Apply for Tuition Refund</td>
</tr>
<tr>
<td>October</td>
<td>16</td>
<td>Friday</td>
<td>Last Day to Apply for Graduation and Certificates Last Day to Remove Incompletes for Spring 1981 (End of 6th Week)</td>
</tr>
<tr>
<td>November</td>
<td>16</td>
<td>Monday</td>
<td>Second Census Day (Monday of 11th Week)</td>
</tr>
<tr>
<td>November</td>
<td>25</td>
<td>Wednesday</td>
<td>Last Day to Apply for Repeated Classes (End of 12th Week)</td>
</tr>
<tr>
<td>December</td>
<td>11</td>
<td>Friday</td>
<td>Last Day to Drop with a &quot;W&quot; Grade (End of 14th Week)</td>
</tr>
<tr>
<td>January</td>
<td>20-27</td>
<td>Wed. - Wed.</td>
<td>Final Examinations</td>
</tr>
<tr>
<td>January</td>
<td>27</td>
<td>Wednesday</td>
<td>Last Day of Fall Semester 1981</td>
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</table>

#### SPRING SEMESTER 1982

<table>
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<tr>
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<td>Sunday</td>
<td>Residence Determination Date Spring Semester 1982</td>
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<td>February</td>
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<td>Monday</td>
<td>First Day of Classes</td>
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<td>Thursday</td>
<td>Last Day to Add or Register (End of 2nd Week)</td>
</tr>
<tr>
<td>February</td>
<td>22</td>
<td>Monday</td>
<td>First Census Day (Monday of 4th Week) Last Day to Apply for Tuition Refund</td>
</tr>
<tr>
<td>February</td>
<td>26</td>
<td>Friday</td>
<td>Last Day to Apply for Graduation and Certificates (End of 4th Week)</td>
</tr>
<tr>
<td>March</td>
<td>12</td>
<td>Friday</td>
<td>Last Day to Remove Incompletes for Fall 1981 (End of 6th Week)</td>
</tr>
<tr>
<td>April</td>
<td>5</td>
<td>Monday</td>
<td>Second Census Day (Monday of 10th Week)</td>
</tr>
<tr>
<td>April</td>
<td>23</td>
<td>Friday</td>
<td>Last Day to Apply for Repeated Classes (End of 12th Week)</td>
</tr>
<tr>
<td>May</td>
<td>7</td>
<td>Friday</td>
<td>Last Day to Drop with a &quot;W&quot; Grade (End of 14th Week)</td>
</tr>
<tr>
<td>June</td>
<td>3-10</td>
<td>Thursday-Thursday</td>
<td>Final Examinations</td>
</tr>
<tr>
<td>June</td>
<td>12</td>
<td>Saturday</td>
<td>Graduation Day</td>
</tr>
</tbody>
</table>
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

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MR. DEAN LEPTICH
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DR. HECTOR LOPEZ
Dean of Counseling Services

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MR. MEL WENDRICK
Director of Physically Limited Services

MR. AL WILSON
Director of Financial Assistance & Placement Service
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MR. BILL GRIFFIN
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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

TO BE DETERMINED
Chairperson of Division of Mathematics and Engineering

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Chairperson of Division of Nursing Education and Health Technologies

MR. JIMMY PENDLEY
Chairperson of Division of Science

MR. WALTER L. SAMSON, JR.
Chairperson of Division of Social Science

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Work Experience Coordinator

MRS. LOUISE E. SAXE
Director of Nursing Education and Health Technologies

MRS. BARBARA MACCI
Director of Early Childhood Programs

DR. JAMES WALKER
Director of Athletics
THE FACULTY

AKERS, H. RUSSELL
Instructional Specialist for the Physically Limited
B.A., Southern Illinois University
M.S., Indiana University

ALBERDA, STANLEY E.
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B.A., Hope College
M.A.L.S., University of Michigan
M.A., Michigan State University

ANDERSON, LESLIE R.
Law Enforcement
B.B.A., Woodbury College

ANDREWS, MARILYN
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B.A., M.A., California State University

ARAGON, RAUL
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ARCHULETA, JOE A.
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B.S., Colorado University
M.A., California State University

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M.S., Kansas State Teachers College

BACZUK, JOHN
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M.A., State University of New York

BANKS, STANLEY C.
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M.A., California Western University

BEAZLEY, HERSCHEL V., JR.
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B.A., Florida State University
M.A., Georgia State
Ed.D., University of Illinois

BEOPE, FRANCES A.
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BERNARD, WILLIS C.
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B.S., Massachusetts College of Art
M.A., California State University

BILLINGS, ROBERT
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M.S., Southwest Texas State College

BRUNGAARDT, MARTHA
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B.S.N., M.S., University of Arizona

BUCKNER, CAROL
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M.A., University of Denver

CERDA, DANIEL
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B.A., San Diego State University
M.A., Northern Arizona University

CERDA, ERNESTINE
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B.A., San Diego State University
M.A., Northern Arizona University

CHAILLE, MICHAEL
Art
B.A., University of California

CHAMPAGNE, PHILIP
Welding
B.A., M.A., Arizona State University

CURLE, DAVID
Photography
B.P.A., Brooks Institute-School of Photography
B.A., San Diego State University

DEPAOLI, JOHN, JR.
Superintendent-President
B.A., M.A., University of California
Ph.D., U.S. International University

DEYO, JEFFREY
Physical Education
B.A., Mount Marty College
M.S., West Virginia University

DIEZ, JAMES
Welding
A.S., San Diego Junior College

EPBERLY, JOYCE
Associate Degree Nursing
R.N., A.S., Imperial Valley College

FARRAR, LLOYD
History
B.A., Oberlin College
M.A., Columbia University

FARRIER, PAUL
History
B.A., M.Ed., M.A., University of Arizona

FIELDS, MAX
Physical Education
Chairperson of Division of Health, Physical Education
and Recreation
B.A., Whittier College
M.A., California State Polytechnic College
Ph.D., Montana State University
FACULTY

FREDRICKSON, JANETH
English as a Second Language
Chairperson of Division of English
B.A., Texas Tech. University, University of Madrid
M.A., Northern Arizona University

FUESLER, JACK B.
Music
Chairperson of Division of Humanities
B.M.E., M.M., Northwestern University

GALAMGAM, ADELAIDA
Assistant Librarian
E.T.C., Ilocos Norte Normal School
B.S.E., Central Philippine College
M.S., Ed., University of Southern California

GARES, V. DALE
Vice President for Academic Services
B.A., M.A., Adams State College
Ph.D., U.S. International University

GENTRY, GLENN A.
Work Experience
Coordinator of Work Experience
B.S., New Mexico State University
M.S., University of Arizona

GRELATT, JAMES
Psychology
B.A., San Diego State University
M.A., La Verne College

GRIFIN, WILLIAM A.
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Chairperson of Division of Business
B.S., University of North Dakota
M.A., Colorado State College

GUZMAN, CESAR
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M.S., La Verne College

HANN, RICHARD K.
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A.B., Chico State College
M.A., San Francisco State College

HAYNES, HARPER
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Retired Auto Body Shop Owner

HEBERT, ROGER
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M.A., Boston University

HILLHOUSE, ROSANNE R.
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B.A., M.A., Oxford University

JEFFCOAT, KENDRA
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M.A., Connecticut College

JERGE, MICHAEL J.
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B.A., M.B.A., University of Arizona

KELSOE, LEON
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B.A., M.Ed., Whittier College

KNOWLTON, ROGER
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M.S., Clarkson College of Technology

KOLLENBORN, RICHARD
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KOSKI, RAUHA K.
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M.N., Yale University School of Nursing

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M.Div., M.A., San Francisco Theological Seminary
M.Ed., University of Nevada

LARSSON, HAROLD J.
Astronomy, Mathematics
B.S., M.A., Columbia University
Ed., M., Harvard University

LEGARRA, STANLEY
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LEPTICH, DEAN A.
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LEWIS, STANLEY
Agriculture, Automotive Technology
B.S., M.S., New Mexico State University

LOPEZ, HECTOR
Dean of Counseling Services
B.A., M.A., Ed.D., Northern Arizona University
EDS., University of New Mexico

LOPEZ, RUBEN O.
Dean of External Campus
B.A., M.A., Adams State College

LOWE, JUANITA
Art
B.S., M.A., Western Carolina College

MACCI, BARBARA
Director of Early Childhood Programs
Chairperson of Division of Behavioral Science
B.A., M.A., San Diego State University

MARTINEZ, MIGUEL
Spanish
B.A., M.A., San Diego State University

MCCORMICK, JOHN M.
English
B.A., Long Beach State
M.A., Northern Arizona University

MEEK, ALFRED
Associate Degree Nursing
B.S., California Polytechnic College
B.S.N., M.S., Fresno State College
MELLINGER, ELWOOD J.
Agriculture
B.S., M.A., Michigan State University

MENDELSOHN, KATHLEEN
Business
B.S., State University of New York

METZ, NANCY
Associate Degree Nursing
B.S.N., M.S., The Ohio State University

MOORE, ROBERT
Business
B.S., Auburn University
M.A., Fresno State College
Ph.D., U.S. International University

MORRIS, D. TERRY
Director of Student Life and Community Services
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MURANO, ORLANDO
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B.A., M.A., University of California

NADEAU, NANCY
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B.A., Florida State University
M.A., University of California

NIEWENHOUS, JEAN
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B.A., University of Kentucky
M.A., Northern Arizona University

ORENSZTEIN, ARMAND
Mathematics
B.S., M.S., University of Illinois
M.A., University of California

ORTEGA, ALICIA Q.
Spanish, French
B.A., M.A., San Diego State University

PAULSON, CLARENCE A.
Business
B.S., M.A., George Peabody College

PENDLEY, JIMMY R.
Biology
Chairperson of Division of Science
B.S., M.S., San Diego State University

PERSKE, GERALD K.
Biological Science
B.S., M.S., University of Nevada

RAULSTON, JEAN
English
B.A., Whittier College
M.Ed., University of San Diego

RICE, PAULINE BENoit
French, Humanities, English
B.A., Rice University
M.A., Baylor University

RICHWINE, HAROLD J., JR.
Chemistry
B.S., Shippenburg State College
M.S., Bucknell University

RODDEN, ROSE
Health Alde
R.N., St. Anthony’s Hospital
B.A., San Diego State University
M.A.V.E., Consortium of California State University and Colleges

RUDOLPH, WILLIAM D.
Dean of Vocational-Technical Education
B.S., M.B.A., Indiana University

SAMSON, WALTER, L., JR.
History
Chairperson of Division of Social Science
B.S., Wisconsin State College
M.A., University of Wyoming

SANTOS, RAFAEL
Business
B.S., Arizona State University
M.B.E., University of Arizona

SCHNEEWIND, V. JEAN
Associate Degree Nursing
R.N., A.S., Imperial Valley College

SMITH, MARY MARGARET
English
B.A., Northern Colorado University
M.A., San Diego State University

SPEER, WILLIAM R.
English
A.B., University of Chicago
M.A., Los Angeles State College

STANDIFORD, SANDRA
Counselor
B.A., University of Missouri
M.S., California State College

STEARNS, HAROLD
Speech, Motion Picture Production
A.B., University of Southern California
M.A., California State University

STONE, JAMES R.
Music
B.E., University of North Carolina
B.M., Westminster Choir College
M.M., University of Southern California

SUCZEK, PETER
Psychology, Sociology
B.A., California State University
M.A., University of California

SWEARINGEN, MICHAEL
Agriculture, History
B.A., California Polytechnic College

THOMPSON, BLAINE R.
Business
B.S., M.S., University of Utah
<table>
<thead>
<tr>
<th>Name</th>
<th>Degree(s)</th>
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</thead>
<tbody>
<tr>
<td>THORNBURG, WILLIAM J.</td>
<td>Vice President for Business Services&lt;br&gt;B.A., University of Redlands&lt;br&gt;M.S., California State University</td>
</tr>
<tr>
<td>TOPPER, IRENE</td>
<td>Associate Degree Nursing&lt;br&gt;Vocational Nursing&lt;br&gt;R.N., Diploma, University Hospital of Chicago School of Nursing</td>
</tr>
<tr>
<td>VALENTINE, MARTIN</td>
<td>English as a Second Language&lt;br&gt;B.A., Arizona State University&lt;br&gt;M.Ed., University of Arizona</td>
</tr>
<tr>
<td>von WERLHOF, JAY</td>
<td>Anthropology&lt;br&gt;M.A., University of California</td>
</tr>
<tr>
<td>WALKER, JAMES D.</td>
<td>Dean of the Evening College&lt;br&gt;Director of Athletics&lt;br&gt;B.S., Minot State College&lt;br&gt;M.S., North Dakota State University&lt;br&gt;Ph.D., U.S., International University</td>
</tr>
<tr>
<td>WASSON, HENRY S.</td>
<td>Physical Science&lt;br&gt;B.S., University of Nebraska&lt;br&gt;M.B.S., University of Colorado</td>
</tr>
<tr>
<td>WENDRICK, MELVIN</td>
<td>Director of Physically Limited Services&lt;br&gt;B.A., Sacred Heart Seminary&lt;br&gt;M.A., University of Michigan</td>
</tr>
<tr>
<td>WHITE, RAY A.</td>
<td>Automotive Technology&lt;br&gt;Chairperson of Division of Agriculture and Automotive Technology&lt;br&gt;A.B., Fresno State College&lt;br&gt;M.A.V.E., Consortium of California State Universities and Colleges</td>
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<tr>
<td>WILHELM, ROBERT</td>
<td>Geography, Political Science&lt;br&gt;B.S., M.A., St. Louis University</td>
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<td>WILLIAMS, RICHARD</td>
<td>Psychology&lt;br&gt;B.S., University of Wyoming&lt;br&gt;M.A., San Jose State University&lt;br&gt;Ph.D., California Institute of Asian Studies</td>
</tr>
<tr>
<td>WILSON, ALFONSO</td>
<td>Director of Financial Assistance &amp; Placement Services&lt;br&gt;B.A., M.A., San Diego State University</td>
</tr>
<tr>
<td>WILSON, PATRICIA</td>
<td>English&lt;br&gt;B.A., University of California</td>
</tr>
<tr>
<td>WOLSKI, WAYNE</td>
<td>English&lt;br&gt;B.A., M.A., University of Wisconsin</td>
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<tr>
<td>WUTHRICH, URSULA</td>
<td>Vocational Nursing&lt;br&gt;B.S.N., California State University</td>
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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 fifty-five years of service to residents of Imperial Valley, the college community 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 community college district be established in Imperial County submitted to the State Department of Education and approved on July 10, 1959. The County Superintendent Schools then set a date for an election at which all quali voters residing within the boundaries of the seven high school and unified school districts were eligible to vote. The election was held on October 6, 1959, and by an overwhelming vote of twelve to one, the Imperial Valley College District was established. This was followed by the election of the members of the Junior College District 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 a small area in the northwest corner of the County which is a part of the Coachella Valley Community College District.

Because of the increase in enrollment at both Central Union High School and the Imperial Valley College, because of the lack of space on the campus of the Central Union High School and the Imperial Valley College, it was forced to move to temporary quarters erected on the campus of Imperial Valley High School in Imperial, California.

On October 4, 1960, an all-time state record was set by 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 nationally known architectural firm to plan the new buildings, and a 160-acre site which met the criteria recommended by the Citizens Committee was selected for the new campus.

On January 13, 1971, the Board of Trustees changed the name of the District to Imperial Community College District 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, members of the planning committee, and many others attended. The new buildings include a library, science laboratories, fine arts rooms, student activities building, academic classrooms, administration and faculty offices, social science rooms, physical education shower and locker rooms, and agricultural education classrooms and shop. The new campus opened in 1962.

Through the judicial use of available tax funds and state aid, a multi-purpose building, comparable to any such junior college building in the state, was constructed. It was designed to house sporting, musical, lecture and dramatic events. It was completed in April, 1967.

In 1975 the college opened a new Library and Media Center which is much larger and offers considerably more extensive learning services than the original Library. It houses a variety of audiovisual equipment and material that circulates audiovisual equipment throughout the campus. The campus has collections of slides, tapes, filmstrips, phonograph records, and multi-media kits that are used in the library as well as in classrooms.

Since 1962 the college has opened the Meyer Center for Business and Commerce, a new agriculture-welding complex, a new student activities building, an art museum and an archaeological museum was opened in downtown El Centro. In 1975 a swimming pool complex was added to the steadily growing college.
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 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 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.
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 by Imperial Valley College for coping with the geography of Imperial Valley, employment, family responsibilities, and other personal circumstances that make it difficult for full participation in regular classes on the main campus.

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

3. Cooperative Work Experience
Cooperative Work Experience is a cooperative educational program between Imperial Valley Community College and community employers.

The college provides the organization, the coordination of class facilities and the personnel for the program. Employers provide places to work (work stations) and on-the-job training which has educational value for the student. The 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 under the Honors or Vocational programs are restricted to the spectator's role in college student activities, and exclusion from curricular participation is to be confined to the high school. Counseling is available at the college, but every effort will be made to leave this responsibility in the high school counseling staffs.

Students must be authorized for attendance and shall receive appropriate college credit. High school credits or Honors or Vocational classes may be negotiated.

Students must attend high school for the minimum school day.

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

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 high school principal. 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 shall recommend a number of high school students in excess of 15 percent of the total number of 11th and 12th-grade students enrolled in the high school at the time of such recommendation.

The student is authorized attendance at community 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 if regularly enrolled at the community college unless, upon agreement between the two districts, the student receives high school credit for the course completed.

Each special part-time student shall attend high school classes for at least the minimum schoolday. (E.C. 7678)

Admittance of Pupil Who Has Completed 11th Grade in Summer Session: Crediting Summer Session Attendance

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 admission to the summer session is recommended by the principal of the high school in which the student completed the 11th 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)

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 wishes to enter.

SCOLASTIC 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 aid 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

There is no tuition charge for students who are legal California residents. Tuition for out-of-state students and out-of-country students is $73.00 per unit with a maximum of $1095.00 per semester with no exemptions.

Expenses normally incurred by all students are for books and supplies. These expenses average approximately $70.00 a semester, but vary depending upon the courses that are taken.

REGISTRATION FEE

The College accesses a $25.00 Registration Fee ($15.00 Registration Fee for External Campus) each semester. This fee, as it indicates, is for registration and once a student registers the fee is due and nonrefundable. The registration fee is waived for persons 60 years of age or older and those who are legally blind.

TUITION REFUND POLICY

Refund in full will be received for the following:

1. Tuition collected in error
2. Discontinued class

Refund Schedule

100% — Before the first day of classes
75% — During the first week of classes
50% — During the second week of classes
25% — During the third week of classes
0% — During the fourth week and thereafter
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, and the State Department of Education. 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. A Career Center is located in the Counseling Center and provides extensive vocational and career information.

Although counselors assist in long-range planning and in checking specific requirements, THE RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS OR REQUIREMENTS FOR TRANSFER TO OTHER COLLEGES OR UNIVERSITIES MUST BE ASSUMED BY EACH 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 in clubs and the social affairs of the year. Others who are interested in athletics will benefit from a variety of intercollegiate sports; and those who are interested in music, publications, or student government will find many opportunities for participation in these activities.

BOOKSTORE AND COLLEGE CENTER

The college bookstore is maintained by the district through a lease arrangement with a private company. All college textbooks and necessary supplies are available. The College Center Building contains a snack and coffee bar that provides refreshments and meals for the students.

ATHLETICS

The college is a member of the Desert Conference, consisting of Barstow, College of the Desert, MiraCosta, Mount San Jacinto, Palo Verde, Victor Valley and Imperial Valley. The Desert Conference is a part of the Southern Section of the California Junior College Association. Intercollegiate competition is held in football, basketball, wrestling, golf, track, cross country, tennis, baseball, volleyball, soccer, and softball.

LEARNING SUPPORTIVE SERVICES

Learning supportive services are designed to provide extensive programs for remediation and enrichment learning and to offer courses designed for the student to gain mastery of study skills and learning techniques. Tutorial assistance services are also available in the Learning Supportive Services Center, and a newly organized Imperial Valley College Tutors Club provides many academic enrichment activities for students interested as tutor addition, bilingual services exist for students with low English-speaking ability and who desire academic assistance in linguistic interpretation in their courses.

The Learning Supportive Services Center houses a variety of audiovisual equipment and media. It has an extensive inventory of slides, tapes, filmstrips, records, multi-media kits, and other instructional learning materials which supplement the broad subject range of courses offered this campus. An extensive videocassette library has been developed which provides students with an opportunity to view educationally relevant television broadcasts and motion pictures.

Nursing and Health Technologies maintains a visual center and learning laboratory in the 800 building. It has an extensive collection of media materials related to nursing and health fields. Bilingual nursing tutors a students in mastering concepts and skills relating to courses.

REGULATIONS

ADMISSION

Admission to Imperial Valley College is governed by the laws of the State and such supplementary regulation prescribed by the Board of Trustees. Students who register for eight or more units of work in a given semester must assure 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 with 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 certification (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 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 year.

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 charges.

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 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 nonresident tuition. Students classified as nonresidents 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 "nonresident" 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 is living, the residence of the parent 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 minor 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 nonresidents, 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. Minors 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 in California or the individual will be subject to nonresident 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' duration presence to satisfy the one-year requirement.

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. An average of 15 to 16 units must be taken to graduate in two years or four semesters.

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

A student who is currently enrolled in another school or college (including correspondence school or independent study) must report this enrollment to the Registration Office. The total number of units carried during a semester for all 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; therefore, students are expected, at the time they file their registration, to make no further change. If a change must be made, students may add classes within a designated period at the beginning of each semester. Changes will be made by obtaining an add card and approval of the instructor and then filing with the Registration Office.

SCHOLARSHIP GRADING SYSTEM

Grades are based upon the quality of work done, that is, upon actual accomplishment in courses offered for credit. Grades showing the standing of students are issued at the end of each semester.

A 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 Passing
   F Failing
   I Incomplete

UNFINISHED WORK, OTHERWISE PASSED

indicating that (because of medical or other significant reason) an important assignment such as a paper, final examination, or experiment is missing.

An Incomplete (I) grade, which is not made up by the end of the sixth week of the next regular semester, shall remain as an Incomplete (I) grade on the student's transcript rather than being converted to a grade. The Incomplete (I) will not be entered as honor points for the purpose of computing grade point average or calculating total units.

2. CREDIT GRADE

Certain courses designated by the appropriate division may be taken for a Cr grade. The student may declare intentions at any time during the semester.

   a. Cr will reflect a letter grade of C or higher.
   b. NC will reflect incompletion of a credit class.
   c. Cr grades are permissible except in the study of major field at Imperial Valley College.
   d. Students applying for Cr must adhere to the institution's class standards or regulations as a student receiving a regular grade.
   e. A maximum of 16 units may be taken on a credit basis with a limit of one class per semester.
   f. The Cr grade will satisfy completion of prerequisites 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 with 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 circumstance will be assigned in accordance with the following schedule:

<table>
<thead>
<tr>
<th>Weeks of Semester</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 through 14</td>
<td>W</td>
</tr>
<tr>
<td>15 through 18</td>
<td>other than a W</td>
</tr>
</tbody>
</table>

All withdrawals are official after being processed by the Registrar's Office. If the withdrawal is signed by both student and instructor, it is an official withdrawal. If signed only by the instructor, it is considered an unofficial withdrawal. The "W" will normally be given to the student during the 1st through the 14th week of a regular semester. The student shall be given a letter grade of other than a "W" after the 14th week.

4. REPEATED CLASSES

Procedures for repeated classes:

   a. Students wishing to repeat a class, in which a grade of D or F was given, must obtain a request form and receive approval from the Registration Office.
   b. For approved courses being repeated, the Registration Office will record an "R" by the letter grade, and units and grade in the previous class will be used in computing total units and grade point average. Repeated classes that are not officially approved will not be allowed for graduation.
5. GRADE POINTS

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
<tr>
<td>Cr</td>
<td>0</td>
</tr>
<tr>
<td>NC</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>0</td>
</tr>
<tr>
<td>W</td>
<td>0</td>
</tr>
</tbody>
</table>

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. 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.

8. 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.

9. 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.

SEMIESTER 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, WF, 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.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
</tbody>
</table>

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 — CHANGES IN CATALOG

PETITION AND HEARING PROCESSES

Formerly and currently enrolled IVC students are entitled to seek and receive responses to any questions related to their educational programs in accordance with the Imperial Community College District educational philosophy.

Petition Process

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

Petition Procedure

The student will use a petition form (available in the Registration Office and Counseling Center) and submit their requests to the Vice President for Student Services who 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 before the appropriate committee.

Hearing Process

There are three established areas which may require hearing procedures for students and campus organizations seeking responses to educational questions or issues. These are:

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 requested to summarize their concerns or issues in writing and submit them to the Vice President for Student Services who is designated coordinator of the hearing procedures.

ATTENDANCE AND AUTOMATIC WITHDRAWALS

A student who fails to attend the first meeting of a class will be dropped by the instructor immediately following that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class.

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

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

VOLUNTARY WITHDRAWAL

A student who is required to withdraw from college because of extenuating circumstances must contact the Registration Office for the procedures to be followed. See "Withdrawal grades."

ACADEMIC DISMISSAL

Academic Dismissal is a system of forced interruption of 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 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, N).

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 participate in physical education activity 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

The student must provide a uniform as prescribed by the physical education department.

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 bulletin 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) of not less than six units of work for which passing grades are earned.
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.

Students may participate in the graduation ceremony only once and may receive only one diploma. Additional degrees, however, are posted on the permanent record.

The requirements for graduation represent not only the minimum general requirements outlined by the State, but also 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 his outlook, and contribute to the realization of the well-balanced whole man.

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.A.—Foreign Language
A.S.—Graphic Arts
A.A.,A.S.—General Business
A.A.—General Major
A.A.—General Office Technician
A.A.,A.S.—General Science
A.A.—Gerontology
A.A.—Governmental Management
A.A.—Human Relations—Community Mental Health Worker
A.A.—Human Relations—Counseling, School and Social Services
A.A.—Human Relations—Personnel, Employment, Counseling and Supervision
A.A.,A.S.—Individual Interdisciplinary
A.S.—Industrial Power Technology
A.A.— Journalism
A.A.—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.—Mathematics
A.A.—Medical Office Assistant
A.A.— Motion Picture Production
A.A.—Music
A.A.—Nursing—Registered
A.A.—Nursing—Vocational
A.A.—Photography
A.S.—Physical Education
A.A.,A.S.—Physical Science
A.S.— Plant Science
A.A.—Real Estate
A.A.—Recreation
A.A.—Rehabilitation Technician for the Physically Limited
A.A.—Secretarial
A.A.,A.S.—Social Science
A.S.—Soils and Water Technology
A.A.,A.S.—Speech Pathology and Audiology
A.A.—Teacher Aide
A.S.—Welding Technology

II. STATE AND INSTITUTIONAL REQUIREMENTS

A. Sixty 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 units in residence, or completion of at least the last fifteen units at Imperial Valley College.
D. Settlement of all financial obligations to the college.

III. SUBJECT AREA REQUIREMENTS

A. American Institutions (Complete any one of the following):
   1. Soc Sci 52—Intro. to American Government
   2. Hist 17AB—United States History
   3. Poli Sci 1—Intro. to Political Science and Poli Sci 2—American Government & Politics
IV. GENERAL EDUCATION

A minimum of 15 units which shall include at least one course in each of the first three areas (a., b., c.) and two courses in area four (d).

a. Natural Science

Ag 5 (Also Env Sci 5) Man and His Environment
Ag 14 Entomology
Anat 8 Human Anatomy
Anat 10 Human Anatomy and Physiology
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
Geog 1 Physical Geography
Geol 1A Physical Geology
Geol 10 (Also Zool 10) Life of the Past: An Introduction to Paleontology
Geol 11 General Geology: An Introduction to Geology
Geol 12 Introduction to Historical Geology
Geol 14 General Paleontology, Dinosaurs, Sabretooths and Man
Nat Sci 51 Survey of the Earth Sciences
Phys Sci 25 Introduction to Physical Science
Phys 2A General Physics
Phys 4A Principles of Physics
Physio 1 Human Physiology
Zool 1A General Zoology

b. Social Science

Anthro 1 Physical Anthropology
Anthro 2 Cultural Anthropology
Anthro 3A Intro. to Archaeological Site Surveying
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 Pre-Historic Meso-America
Anthro 8 Indians of the Southwest
Bus 2 Introduction to Business
ECE 28 (Also Psych 28) Administration and Supervision in Early Childhood Education
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 Mexico and the American Southwest

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ECE 28 (Also Psych 28) Administration and Supervision in Early Childhood Education
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 Mexico and the American Southwest
** Fr 10 Intermediate Conversational French
** Fr 11 Intermediate Conversational French
** Fr 20A French Drama—Reading and Performance
** Fr 20B French Drama—Reading and Performance
Fr 40 (Also Hum 40) Introduction to French Civilization and Culture
Fr 41 (Also Hum 41) Introduction to French Civilization and Culture Beyond France
Fr 51 French Culture, Cuisine and Conversation
Ger 1 Elementary German
Ger 2 Elementary German
Ger 10 Conversational German
Ger 11 Conversational German
Hist 4A History of Western Civilization
Hist 4B History of Western Civilization
Hum 1A Man and the Arts
Hum 1B Man and the Arts
Hum 25 The Humanities
Hum 26 The Humanities
Hum 40 (Also Fr 40) Introduction to French Civilization and Culture
Hum 41 (Also Fr 41) Introduction to French Civilization and Culture Beyond France
** Ital 1A Elementary Italian
** Ital 1B Elementary Italian
Jrn 3 Mass Communications
Jrn 4 Journalistic Issues
** Mus 17AF Chamber Singers
** Mus 18AF Chamber Orchestra
Mus 20A History and Literature of Music
Mus 20B History and Literature of Music
** Mus 25AF Stage Band
** Mus 27AF Concert Band
Mus 30 Intro. to Music Literature and Listening
Mus 31 Introduction to Twentieth-Century Music
Phil 1A Introduction to Philosophy
Phil 1B Introduction to Philosophy
Phil 11 Ethics
Phil 25 Religions of the Modern World
Span 1 Elementary Spanish
** Span 1A Elementary Spanish
** Span 1B Elementary Spanish
Span 2 Elementary Spanish
** Span 2A Elementary Spanish
** Span 2B Elementary Spanish
Span 3 Intermediate Spanish
Span 4 Intermediate Spanish
** Span 5A Beginning Conversational Spanish and Culture
** Span 5B Beginning Conversational Spanish and Culture
Span 10 Intermediate Conversational Spanish
Span 11 Advanced Conversational Spanish
Span 20A Beginning Bilingual Spanish
Span 20B Beginning Bilingual Spanish
Span 21 Intermediate Bilingual Spanish
Span 22 Advanced Bilingual Spanish
Span 23 Bilingual Oral Spanish
Span 24 Introduction to Spanish Literature
Span 25 Introduction to Spanish American Literature for Bilinguals
Span 28A (Also Eng 30) The Mexican American in Literature
Span 28B (Also Eng 30B) The Mexican American in Literature
Span 40 (Also Hist 40) Civilization of Spain and Portugal
Span 41 (Also Hist 41) Civilization of Spanish America and Brazil
Span 42 Intro. to Mexican American Studies

** Span 53 (Also Mus 55) Beginning Guitar and Mexican Folk Songs for Spanish Speakers
** Span 54A Beginning Conversational Spanish for Careers
** Span 54B Beginning Conversational Spanish for Careers
d. Learning Skills
1. Eng 1A Reading and Composition
   or Eng B Basic English Composition
   or Eng 51 The Communication Process
   or Jrn 1 Introduction to Journalism
   and
2. One of the following:
   Ag 20 Animal Science
   Ag 28 (Also Hum 35) Heavy Equipment Operation and Maintenance
   Art 18A Watercolor Painting
   Art 20A Drawing
   Art 22A Design
   Art 23A Ceramics
   Art 24AB Ceramic Sculpture
   Art 26 Design in Crafts
   Art 27 Creative Handweaving
   Art 28 Technical Ceramics
   Art 29A Jewelry
   Art 29B Jewelry
   Art 31 Crafts
   ** Art 40 Exploration of Acrylic Painting Techniques
   Auto Body 70 Auto Body Repairing & Painting
   Auto Tech 51 Engine Technology
   Bus 9 (Also Math 17) Math for Business Analysis
   Bus 10A Practical Bookkeeping
   Bus 11 (Also Soc Sci 68) Personal Finance
   ** Bus 12 Personal Income Tax
   ** Bus 20 Elementary Typewriting
   Bus 31 Elementary Shorthand
   Bus 50 Introduction to Data Processing
   Bus 65 Retail Sales Checking
   Bus 79 (Also Jrn 8) Public Relations Techniques
   Dlm Art 20AB Fundamentals of Acting
   Electricity 1 Basic Electricity
   Engr 18A Plane Surveying
   Engr 21 Technical Drawing
   Engr 72A Surveying for Engineering Technology
   Eng A Basic English Composition
   Eng B Basic English Composition
   Eng 7 Technical and Report Writing
   Eng 8 Advanced Composition
   Eng 9AB Creative Writing
   Eng 12 Rapid Reading and Study Skills
   Eng 42 Advanced English as a Second Language
   Eng 43C Advanced Oral English for Bilinguals
   Eng 47 Vocabulary Building for Bilinguals
   Eng 49 Reading Development for Bilinguals
   Eng 50A Reading Development
   Eng 50B Reading Development
   Eng 52AB Vocabulary Building
   ** Eng 55AB Spelling
   Eng 56A Writing Fundamentals
   Eng 56B Writing Fundamentals
**TRANSFER REQUIREMENT**

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

1. The completion of the specified requirement for upper-division majors and minors.
2. The completion of the lower-division prerequisite general education courses.

These requirements vary according to the requirements of the institution of higher education in which the student expects to enroll. The institution should consult the catalog of the institution regarding specific requirements that must be met. Additional information is available in the Counseling Center. A student planning to transfer to one of the campuses of the University of California, State Student Services, or other institutions maintaining equivalent standards to which the student expects to transfer must meet these requirements. In order to meet the general education requirements, a student must complete forty (40) units selected from the curriculum of general education courses.

**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.

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**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.

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng 57</td>
<td>Library Resources</td>
</tr>
<tr>
<td>HE 2</td>
<td>First Aid</td>
</tr>
<tr>
<td>HR 8</td>
<td>Personal and Career Development</td>
</tr>
<tr>
<td>LE 23</td>
<td>Defensive Tactics</td>
</tr>
<tr>
<td>LE 29</td>
<td>Preliminary Investigation and Reporting</td>
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<tr>
<td>LE 39</td>
<td>Arrest and Firearms</td>
</tr>
<tr>
<td>LT 51</td>
<td>Introduction to Library Services</td>
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<tr>
<td>Math A</td>
<td>Intermediate Algebra</td>
</tr>
<tr>
<td>Math C</td>
<td>Plane Trigonometry</td>
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<tr>
<td>Math 2</td>
<td>Advanced Algebra and Trigonometry</td>
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<td>Math 3A</td>
<td>Analytic Geometry and Calculus</td>
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<tr>
<td>Math 10</td>
<td>Math for Elementary School Teachers</td>
</tr>
<tr>
<td>Math 12</td>
<td>(Also Bus 26/Psych 12) Elementary Statistics</td>
</tr>
<tr>
<td>Math 17</td>
<td>(Also Bus 9) Math for Business Analysis</td>
</tr>
<tr>
<td>Math 18</td>
<td>Introduction to Mathematics</td>
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<tr>
<td>Math 52</td>
<td>The Metric System</td>
</tr>
<tr>
<td>MPP 10</td>
<td>(Also Eng 10) Introduction to Motion Picture Production</td>
</tr>
<tr>
<td>Mus 7</td>
<td>Introduction to Music Foundations</td>
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<td>Mus 10A</td>
<td>Beginning Group Piano I</td>
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<td>Mus 12</td>
<td>Beginning Class Guitar</td>
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<tr>
<td>Mus 13</td>
<td>Intermediate Class Guitar</td>
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<td>Beginning Class Voice</td>
</tr>
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<td>Mus 21AD</td>
<td>Brass, Woodwind and Percussion Methods</td>
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<td>Mus 32AD</td>
<td>Applied Music</td>
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<td>Phil 10</td>
<td>Logic</td>
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<td>Ph 5</td>
<td>(Also Jnr 5) Introduction to Photography</td>
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<td>PL 10</td>
<td>Beginning Communication with the Deaf</td>
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<td>PL 20</td>
<td>Literary Braille</td>
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<td>PL 33</td>
<td>Introduction to Audiology</td>
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<td>PL 40</td>
<td>Introduction to Physical Therapy</td>
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<td>PL 41</td>
<td>Introduction to Occupational Therapy</td>
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<td>Psych 12</td>
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<td>Soc Sci 69</td>
<td>(Also Bus 11) Personal Finance</td>
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<td>Sp 1</td>
<td>Oral Communication</td>
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<td>Sp 11</td>
<td>Oral Interpretation—Readers Theatre</td>
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<td>Sp 30</td>
<td>Voice and Articulation Development</td>
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<td>TA 1</td>
<td>Introduction to Instructional Associate</td>
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<td>Weld 30</td>
<td>Arc Welding</td>
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<td>Inert Gas Shielded Arc Welding</td>
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<td>WE Occ 81</td>
<td>Motivation</td>
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<td>WE Occ 82</td>
<td>Labor and the Economy</td>
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<td>WE Occ 83</td>
<td>Laws Affecting Employees</td>
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*1 Unit Courses  **2 Unit Courses
It is most important that students consult with a counselor 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 selection of proper courses rests with the student.

CERTIFICATES

Occupational Certificates are awarded to convey evidence that well-defined levels of proficiency have been attained 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 at least a C grade average (2.0 GPA) for each course required for the certificate and all such courses taken at Imperial Valley College.
3. File a certificate petition with the Registrar not later than the end of the sixth week of the fall semester, the fourth week of the spring semester and the first week of the summer session.

Certificates are offered in the following areas:

- Field Archaeology
- Automotive Body Repair and Painting
- Automotive Technology
- Banking
  - Secretary Certificate—Bank Service
  - General Certificate—Bank Service
  - Administrative Certificate in Bank Operations
  - Credit Administration Certificate in Banking
- Business
  - Office Technician: (Receptionist, File Clerk, Small Business Records)
  - Clerk Typist
  - Secretary/Stenographer
  - Bookkeeper Technician
- Carpentry
- Cosmetology
- Early Childhood Education
- Electronics
  - Basic
  - Intermediate
- 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
- Basic Library Technician
- Marketing-Sales Technology
- Real Estate
- Recreation
- Rehabilitation Technician for the Physically Limited
- Teacher Aide
- Vocational Nursing
- Water Treatment
- Welding
- Occupational Work Experience
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 section or class, the average daily attendance which is to be reported for state aid, wherever offered, is maintained by Imperial Community College District, subject to enrollment and participation by any person who has been admitted to the college and who meets prerequisites as may be established pursuant to Chapter 2, Part VI, Title 5 of the California Administrative Code commencing with Section 51820 (Board of Trustees Resolution No. 5082).

**SUMMER SESSION**

(When Offered)

Summer Session calendar and admission requirements may be found in the Summer Session Bulletin or Schedule 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**

3 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**

3 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 agencies.

**AG 26 (3)**

**AGRICULTURAL BUSINESS ORGANIZATION AND MANAGEMENT**

3 Hrs. Lec.

Study of farm technological advances, marketing, consumer demand and such factors as determinants of market types and forms of agricultural business organization. Farm and farm-related businesses considered from the standpoint of primary functions, services problems including investments, engagement and working capital requirements, credit and collections, business 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, promotional incentives and service.

**AG 28 (5)**

**HEAVY EQUIPMENT OPERATION AND MAINTENANCE**

3 Hrs. Lec. 6 Hrs. Lab.

(Same as H.M. 35)
AG 30 (3)
AGRICULTURAL MECHANICS
2 Hrs. Lec. 2 Hrs. Lab.
Selection and evaluation of production equipment. Study of specifications, plans and construction of general agricultural equipment. Pipe work and electrical installations. Selection and grading of lumber and wood preservatives; cold and hot metal work; theory and testing of electrical motors; utilization and construction of agricultural facilities.

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. Review the study and service procedure of the diesel fuel systems and governors. A materials fee will be charged. (Same as Auto Tech 55)

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)
ELECTRICITY ON THE FARM
2 Hrs. Lec. 2 Hrs. Lab.
Fundamentals of electric wiring; circuit layout and problems; motor and branch circuit protection; safe use of electricity; wiring the farmstead; and motor maintenance.

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 production in vegetable gardening. Cultural practices, harvesting, grading and processing, marketing, disease and pest control of California vegetable crops.

AG 44B (2)
VEGETABLE GARDENING—WARM WEATHER
6 Hrs. Lab.
Organic and inorganic production in vegetable gardening. Cultural practices, harvesting, grading and processing, marketing, disease and pest control of California vegetable crops.

AG 45 (3)
ORNAMENTAL PLANT IDENTIFICATION AND MATERIALS
3 Hrs. Lec.
Identification, growth habits, culture and ornamental use of house plants, vines, groundcovers, annuals, perennials, small shrubs adapted to the climate of the southern valleys of California.

AG 47 (3)
NURSERY PRACTICES
2 Hrs. Lec. 3 Hrs. Lab.
A general course in ornamental horticulture with emphasis on nursery operation. Includes nursery structures and layout, seeding, transplanting, potting, balling, canning, fertilizing, pest control, plant diseases, and abnormalities. Propagating and planting mediums, their preparation and use. The use and maintenance of the common tools and equipment.

AG 48 (3)
TREES, SHRUBS AND VINES
3 Hrs. Lec.
Selection, planting, training, pruning and cultural practices of trees, shrubs, and vines in California— including citrus and grapes.

AG 49 (3)
WEEDS AND WEED CONTROL
3 Hrs. Lec.
Common and noxious weeds of California, their identification, life history, and control. Chemicals and equipment used for weed control on cultivated land, in irrigation ditches, on the range, and on wasteland. Poisonous weeds, their effects and prevention.
AG 50 (3)
SHOP MATHEMATICS
3 Hrs. Lec. 2 Hrs. Lab.
(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 and evaluation of field management practices during spring months.

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

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

AG 64AB (1)
HORSEMANSHIP - EQUITATION
1 Hr. Lec. 1 Hr. Lab.
The fundamentals of horsemanship and equitation, English and Western, the anatomy of the horse and safety are emphasized. (Students may provide their own horse and trail it to instruction areas if carried on college accident policy or show evidence of coverage under family policy. A lab fee will be charged for those students who cannot provide their own horse.) (Same as P.E. 64AB)

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 66 (1)
INTERMEDIATE HORSEMANSHIP - EQUITATION
1 Hr. Lec. 1 Hr. Lab.
Prerequisites: AG 64AB or consent of instructor. Intermediate horsemanship under saddle. Grooming, saddling, bridling, mounting, seat and hands. Study of types of horse gear and equipment. Safety precautions are emphasized. This course fulfills one semester of the physical education requirement. (Students may provide their own horse and trail it to instruction areas provided that the student has evidence of college or personal insurance coverage. A lab fee will be charged for those students who cannot provide their own horse.) (Same as P.E. 66)

AG 69ABCD (2-2-2-2)
COLLEGE Rodeo
10 Hrs. Lab.
Prerequisites: Students must provide all their own equipment, supplies, insurance and membership or entrance fees. Course designed to give students the chance to participate in the sport of rodeo on the college level. (Same as P.E. 39ABCD)

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

ANATOMY

ANAT 8 (4)
HUMAN ANATOMY
2 Hrs. Lec. 6 Hrs. Lab.
Prerequisite: High school biology with a grade of C or better or Zoool 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.

ANTHRO 1 (3)
PHYSICAL ANTHROPOLOGY
3 Hrs. Lec.
Prerequisite: Eleventh grade reading level ability is recommended for success in this course. An introduction to the study of evolution and racial variation in man. Emphasizes the processes of evolution, the relationship of man and the animals, fossil man, and the origin and meaning of race.

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 ARCHAEOLICAL SITE SURVEYING
2 Hrs. Lec. 5.33 Hrs. Lab.
Introduction to archaeological surveying; historical development of archaeology; major contributors; major periods; trends in site surveying; types of sites; survey techniques; finding artifacts; field recording and mapping; artificial stratigraphy; cultural survival; and the study of the relationship of man to animals.

ANTHRO 3B (3)
INTRODUCTION TO ARCHAEOLOGICAL EXCAVATIONS
2 Hrs. Lec. 5.33 Hrs. Lab.
Introduction to archaeological excavation; lay ing out site survey; excavation; selecting sites; testing trenching; stratigraphy; keeping records; interpreting data; preparing artifacts; care of materials; 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, and map small areas on survey and write technical readable reports. Field surveys will be arranged in Los Angeles County.

ANTHRO 3D (3)
ADVANCED ARCHAEOLOGICAL EXCAVATIONS
2 Hrs. Lec. 5 Hrs. Lab.
Prerequisite: Anthro 3B and consent of the instructor. Students will design and carry out field excavation projects, organize a field crew with which to carry it out, record and inventory artifacts, and prepare technical, but readable report of findings. Laboratory studies will include reconnaissance, photography and C14 dating. 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 family, primitive society; and Indian art, music, stories, religion, institutions, structures, artifacts, and 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 PREHISTORIC 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, Hohokam and Mogollon cultures. Inter-cultural relations, trade, ceramics, pueblo life, religion, and art agriculture. Cultural extensions into California. Rise of modern societies, as the Zuni, Hopi, Navajo and Apache. Contemporary life.

ANTHRO 9 (3)
MEXICAN AMERICAN CULTURAL TRADITIONS
3 Hrs. Lec.
This course traces the ethnic background and development of the Mexican from the Spanish Conquest to independence (1519-1821), with an emphasis on the origins and rise of ethnic values and attitudes. The interrelationships between Mexicans and Americans to the present are examined.

ANTHRO 10 (1)
ETHNOBOTANY OF IMPERIAL COUNTY
1 Hr. Lec. 1 Hr. Lab.
A survey of flora indigenous to Imperial County, and lectures on aboriginal uses of plants for medicinal, dietary, spiritual, and craft purposes. Two field trips, at the end of the third and sixth weeks, to examine such of the plants as are flowering.

ANTHRO 11 (3)
INDIANS OF SOUTHERN CALIFORNIA
3 Hrs. Lec.
This course focuses on the Shoshone and Yuman groups of Southern California, and the diverse environments in which they lived. As background, the study takes up the Paleindians who came to inhabit this area when it was high desert climate in the late Pliocene, and traces their gradual demise as the country turned arid. It traces the adaptation to the desert of the later Indians over 2,500 years to the historic period.

ANTHRO 12 (2)
ETHNOGRAPHY OF THE YUMAN INDIANS
2 Hrs. Lec. 1 Hr. Lab.
Following a geographical and archaeological background of the Yuman territory, this course goes into the ethnography of the Yuman group of the Hokan speakers, covering general cultural subjects as the material basis, socio-economic organization, political organization, religion, and symbolic expressions in art and folklore. One day a month will be spent in the field visiting Yuman and Pre-Yuman sites, features, and museums.

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 MODERN 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 continuation of 21A.

ART 22A (3)
DESIGN
2 Hrs. Lec. 3 Hrs. Lab.
Fundamentals of design and composition; theory of color. Includes organization and utilization of basic elements through design problems.

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

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

ART 23B (3)
CERAMICS
1 Hr. Lec. 5 Hrs. Lab.
Prerequisite: Art 23A. A continuation of Art 23A with emphasis on the potter's wheel.
ART 23C (3)
CERAMICS
1 Hr. Lect. 5 Hrs. Lab.
Prerequisite: Art 23B with a grade of C or better. A continuation of Art 23B with special emphasis on glaze formulation and decorating techniques.

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

ART 25A (3)
LIFE DRAWING
6 Hrs. Lab.
Prerequisites: Art 20A and 20B with a grade of C or better. Many types of drawing and painting techniques are used to further the student's skill, and development of visualization by drawing from the human figure.

ART 25B (3)
LIFE DRAWING
6 Hrs. Lab.
Prerequisite: Art 25A. A continuation of Art 25A. Art 25B includes exploration of painting techniques using varied media.

ART 26 (3)
DESIGN IN CRAFTS
6 Hrs. Lab.
An introduction to the study of several traditional crafts with an emphasis on creative design and individual exploration. Experiences in metal jewelry, batik and tie-dye, printmaking, fibers, sand casting and enameling.

ART 27 (3)
CREATIVE HANDWEAVING
6 Hrs. Lab.
An exploratory course structured as an introduction to the craft of non-loom weaving. Its emphasis is on the exploration of texture and color using contemporary and traditional techniques. Experiences in the design and structure of wall hangings, tapestries, rugs, body ornaments, and accessories will acquaint the student with basic weaving techniques, fibers, and ancient and modern hand looms. Additional study in spinning and dyeing yarns.

ART 28 (3)
TECHNICAL CERAMICS
2 Hrs. Lect. 3 Hrs. Lab.
Prerequisites: Art 23C or permission of instructor. A study of the raw materials used in compounding clay bodies and glazes. Specific problems of glaze calculations and techniques of glaze application.

ART 29A (3)
JEWELRY
1 Hr. Lect. 5 Hrs. Lab.
An introduction to the study of jewelry with emphasis on the practical and technical skills of jewelry fabrication. Experience in traditional techniques and exploration in creative design and contemporary techniques.

ART 29B (3)
JEWELRY
1 Hr. Lect. 5 Hrs. Lab.
Prerequisites: Art 29A or permission of the instructor. Second-semester jewelry course with emphasis on the practical and technical skills of casting, forging and advanced metal smithing techniques. Exploration in creative design and contemporary techniques with experience in traditional methods.

ART 30A (2)
INTRODUCTION TO ART
1½ Hrs. Lect. 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. Lect. 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 31 (3)
CRAFTS
2 Hrs. Lect. 3 Hrs. Lab.
A basic craft course exploring the use of art materials, media, techniques and methods. Recommended for students planning to become elementary teachers or recreation directors.

ART 32 (3)
INTRODUCTION TO STAINED GLASS
1 Hr. Lect. 5 Hrs. Lab.
Introduction to the techniques of designing and fabricating stained glass windows and lampshades. Emphasis on types of glass, tools, glass cutting procedures, lead came, copper foil, soldering and finishing techniques. Includes the history of stained glass, safety procedures and equipment, and tool maintenance.

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. Lect. 2 Hrs. Lab.
An exploratory course which provides opportunities to work with the various acrylic 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.

ART 50 (2)
INTRODUCTION TO LAPIDARY
1 Hr. Lect. 2 Hrs. Lab.
Introduction to techniques of cutting and polishing gemstones. Emphasis on recognition and identification, field collection, mounting, cutting, and valuation of gemstones. Includes safety and maintenance of diamond saws, polishing equipment, and vehicle regulations and lapidary job and career opportunities.

ART 51 (2)
ADVANCED LAPIDARY ARTS
2 Hrs. Lect. 1 Hr. Lab.
Practical application of advanced techniques of cutting and polishing gemstones. Emphasis on identification and testing procedures, specimen cutting, and production of cut gem mountings. Includes update on and federal collecting restriction and road vehicle regulations and collection techniques. Also covers methods of marketing cut gemstones and cutting jewelry.

ASTRONOMY

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AUTOMOTIVE BODY AND PAINT

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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. 2 Hrs. Lab.
(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)
GASOLINE AND DIESEL 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. Review the study and service procedure of the diesel fuel systems and governors. 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. Trouble shooting the various components of the automobile using the oscilloscope and dynometer 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 of 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-
AVIA 1 (3)
INTRODUCTION TO AVIATION
3 Hrs. Lec.
Serves to meet the written test and ground school requirements to procure a Private Pilot's Certificate and as a refresher for Pilots. The material covers aviation, meteorology, aircraft frame, aircraft engines, and current FAA regulations.

AVIA 2 (3)
INSTRUMENT GROUND SCHOOL
3 Hrs. Lec.
Prerequisite: Private Pilot's certificate. This course is designed to prepare private and commercial pilots for the FAA instrument written examination. It also serves as a reference course for all pilots and prepares those who are studying for the FAA commercial written examination.

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: Any year course in a high school life science or a semester of college biology. 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 stems, roots, leaves, flowers, and seeds of the flowering plants.

BUSINESS

BUS 1A (4)
PRINCIPLES OF ACCOUNTING
4 Hrs. Lec. 1 Hr. Lab.
Prerequisite: Satisfactory score on the mathematics placement test or completion of Math 51 with a C or better grade. Introduction to the theory, practice, and principles of accounting as they relate to service enterprises and mercantile enterprises. Includes the completion of the accounting cycle, sales, purchases, summarizing and reporting, receivables, payables and inventories, deferrals and accruals, depreciation, systems and controls and payroll systems.

BUS 1B (4)
PRINCIPLES OF ACCOUNTING
4 Hrs. Lec. 1 Hr. Lab.
Prerequisite: Satisfactory completion of Bus 1A. Principles involved in partnerships, corporations, departmental accounting, process cost systems, job order costs, budgetary control, income taxes, cash flow, and financial statement analysis.

BUS 2 (3)
INTRODUCTION TO BUSINESS
3 Hrs. Lec.
A basic beginning college course that introduces U.S. business and industry. Includes the nature and importance of business, business forms and organization, management, finance, marketing, government and legal regulations, pricing and taxes.

BUS 3 (3)
BUSINESS MANAGEMENT
3 Hrs. Lec.
A study of the organizing and merchandising problems of a business; financial problems; business management.

BUS 4 (3)
PRINCIPLES OF MARKETING
3 Hrs. Lec.
The organization and operation of systems for the distribution of goods and services; includes a study of retail and wholesale distribution channels, consumer buying characteristics, marketing of industrial goods, cooperative marketing of agricultural producing 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, personal property, sales, security, insurance, partnerships, corporations, real property, estates and trusts, and government and business law. 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 supervisors in meeting administrative, organizational, labor and human relations problems; the utilization of machines and materials, and studies in supervisory problems.

BUS 7 (3)
HUMAN RELATIONS IN MANAGEMENT
3 Hrs. Lec.
Improving supervision by the use of basic psychology in building employer-employee relations through human relations techniques. Development of leadership qualities that maintain 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 search and company experience. Includes the personnel manager 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)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 10A</td>
<td>PRACTICAL BOOKKEEPING</td>
<td>3 Lec</td>
<td>A basic course in elementary basic accounting principles that uses the &quot;practice set approach&quot; to learn how to journalize and post transactions for service-type businesses that keep their books on the cash basis.</td>
</tr>
<tr>
<td>BUS 10B</td>
<td>PRACTICAL BOOKKEEPING</td>
<td>3 Lec</td>
<td>Prerequisite: BUS 10A or permission of instructor. A course that uses the &quot;practice set approach&quot; to journalize and post transactions for merchandising businesses that keep their books on the accrual basis.</td>
</tr>
<tr>
<td>BUS 11</td>
<td>PERSONAL FINANCE</td>
<td>3 Lec</td>
<td>Practical application of the principles of good business to the handling of personal funds. Budgets, financial services, insurance, investments, home ownership, taxes, and consumer problems. (Same as Soc Sci 69)</td>
</tr>
<tr>
<td>BUS 12</td>
<td>PERSONAL INCOME TAX</td>
<td>2 Lec</td>
<td>An elementary course in computation of income tax, use of forms and some of the less complex computations. Tax regulations are studied and students are taught to prepare returns.</td>
</tr>
<tr>
<td>BUS 13</td>
<td>APPLIED BUSINESS LAW</td>
<td>3 Lec</td>
<td>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.</td>
</tr>
<tr>
<td>BUS 14</td>
<td>PRACTICAL SALESMANSHIP</td>
<td>3 Lec</td>
<td>The practical background of salesmanship; the duties and functions of a salesman in the selling of ideas, services, and products. Includes the place and importance of salesmen in the marketing structure of the U.S. economy.</td>
</tr>
<tr>
<td>BUS 19</td>
<td>PERSONAL DEVELOPMENT FOR EMPLOYMENT</td>
<td>3 Lec</td>
<td>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.</td>
</tr>
<tr>
<td>BUS 20</td>
<td>ELEMENTARY TYPWRITING</td>
<td>2 Lec</td>
<td>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.</td>
</tr>
<tr>
<td>BUS 21A</td>
<td>PROFICIENCY—EXIT TYPWRITING</td>
<td>1 Lec</td>
<td>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.</td>
</tr>
<tr>
<td>BUS 22</td>
<td>MACHINE TRANSCRIPTION</td>
<td>3 Lec</td>
<td>Prerequisite: BUS 40 or demonstrated knowledge of English grammar by test and ability to type 40 wpm. Use of dictating-transcribing machine.</td>
</tr>
<tr>
<td>BUS 23</td>
<td>OFFICE MACHINES</td>
<td>2 Lec</td>
<td>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.</td>
</tr>
<tr>
<td>BUS 24</td>
<td>RECORDS MANAGEMENT</td>
<td>3 Lec</td>
<td>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.</td>
</tr>
<tr>
<td>BUS 25</td>
<td>FINANCIAL RECORD TYPING</td>
<td>1 Lec</td>
<td>Prerequisite: BUS 20 or ability to type 50 wpm. Designed to bring students to an office-level skill in production work relating to a financial office. Emphasis is placed on business forms, financial tables, statistical typing, and speed/accuracy development.</td>
</tr>
<tr>
<td>BUS 26</td>
<td>ELEMENTARY STATISTICS</td>
<td>3 Lec</td>
<td>(Same as Math 12/Psych 12)</td>
</tr>
</tbody>
</table>
structure of the sentence, and punctuation. Exercises to improve English usage will be written on the writing of various sentence types and progress to the writing of single descriptive and expository paragraphs. Designed for students who need to review and practice basic skills before taking Eng 51 or Eng AB. Concurrent enrollment in Eng 50A-B is strongly recommended. Satisfies part of the graduation requirement in communications.

BUS 41 (2)
ESSENTIALS OF BUSINESS CORRESPONDENCE
3 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.
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-aided coding, program optimizing, basic file maintenance, computer problem planning and report writing.

BUS 54 (3)
DATA PROCESSING SYSTEMS
3 Hrs. Lec.
Prerequisite: Bus 53. A study of data processing systems and procedures including analysis of various existing business data processing applications, integrated processing principles, total management information, and data systems concepts. Case study projects developing detailed data processing procedures are stressed.

BUS 55 (3)
PROGRAMMING IN FORTRAN
3 Hrs. Lec.
A practical course covering the fundamentals of Fortran Programming as adapted to a variety of applications. (Same as Math 47)

BUS 56AB (1-1)
COMPUTER OPERATIONS LAB
2 Hrs. Lab.
Prerequisite: Concurrent enrollment in Bus 52 or Bus 53. Course design provide an opportunity for additional experiences with software and hardware related to the curricula of Bus 52 or Bus 53.

BUS 57 (3)
PROGRAMMING IN BASIC
3 Hrs. Lec.
A practical course covering the fundamentals of BASIC Programming as adapted to a variety of applications.

BUS 59 (1)
KEYPUNCHING
1 Hr. Lec. 2 Hrs. Lab.
Prerequisite: Ability to type 40 wpm. Beginning course in acquainting the student with the basic principles of punched card key machines. The course is designed to develop key punch skills to entrance-level job requirements.

BUS 60 (3)
PRINCIPLES OF BANK OPERATIONS
3 Hrs. Lec.
Fundamentals of bank function in descriptive fashion so that the beginning student may seek a broad and open prospective in banking.

BUS 61 (3)
ANALYSIS OF FINANCIAL STATEMENTS
3 Hrs. Lec.
Prerequisites: Bus 1A and 1B. The course focuses upon investment analysis of credit to appraise the ex ante and ex post nature of risk involved, and to determine the willingness and ability of prospective debtor to repay a proposed loan in accordance with terms set forth in a loan agreement. Topic includes profit-loss analysis, analyzing of income and the development of ratio analysis.

BUS 62 (3)
INSTALLMENT CREDIT
3 Hrs. Lec.
In this class, emphasis is placed on establishing the credit obtained by checking information; servicing the loan and calculating the amount due. Of the topics discussed are inventory financing and special loan programs. Busin development advertising in the relative aspect of installment lending.
COURSES OF INSTRUCTION

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 audit 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; forms of pleadings; procedures for various actions (probate, divorce, and civil litigation); 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.

BUS 91 (3)  
REAL ESTATE PRACTICES  
Hrs. Lec.  
Prerequisite: Bus 90 or employment in the real estate field as a licensee. An analysis of the problems related to the establishing and conducting of a real estate business; the real estate business, the real estate office, listings, valuation of listings, prospecting, advertising, the selling process, closing the sale, financing real estate, exchanges and specialized brokerages, income properties, property management and leasing, taxes and real estate deals, land utilization, and professional and public relations.

BUS 92A (3)  
LEGAL ASPECTS OF REAL ESTATE  
3 Hrs. Lec.  
Prerequisite: Bus 90 or employment in the real estate field as a licensee. A practical applied study of California Real Estate Law intended to be of help in avoiding legal difficulties which can arise in connection with real estate transactions.

BUS 92B (3)  
LEGAL ASPECTS OF REAL ESTATE  
3 Hrs. Lec.  
Prerequisites: Bus 92A or real estate license. This course expands the coverage of the basic course outline on this subject to include further consideration of those areas of the law where problems are most frequently encountered or which present so many facets that further time is needed to consider adequately the scope and effect of applicable laws.

BUS 93 (3)  
REAL ESTATE FINANCE  
3 Hrs. Lec.  
Prerequisite: Bus 90 or employment in the real estate field as a licensee. A practical applied study and analysis of money markets, interest rates and real estate financing, with actual case illustrations demonstrating lending policies, problems, and rules involved in financing real property, including residential, multifamily, commercial, and special purpose properties.

BUS 94A (3)  
REAL ESTATE APPRAISAL  
3 Hrs. Lec.  
Prerequisite: Permission of the instructor or employment in the real estate field as a licensee. Methods and techniques for determination of loan, market, and insurance values. Case study methods are employed; field work and demonstration appraisal reports are required. Principles of real estate valuations; cost, market data, summation and sales analysis methods of appraising are studied with an emphasis on residential properties.

BUS 94B (3)  
REAL ESTATE APPRAISAL  
3 Hrs. Lec.  
Prerequisite: Bus 94A or real estate license. This course extends the appraisal techniques of real estate appraisal and the use of the three standard approaches to value on the many types of properties and interests that an appraiser might be called upon for an opinion of value, such as apartments, commercial, industrial, rural property, leasehold interest, business values, and the bounds of responsibility.
BUS 95 (3)
REAL ESTATE ECONOMICS
3 Hrs. Lec.
Prerequisites: Bus 90, 91, 92A and 92B, recommended Bus 93, 94A and 94B. A practical study of the economic aspects of real estate designed to provide a grasp of the dynamic economic conditions and other factors underlying the real estate business in California. This is designed to be the senior course — the final course — in the real estate curriculum.

BUS 96 (3)
INTRODUCTION TO PROPERTY MANAGEMENT
3 Hrs. Lec.
This course, broad in scope, is designed to assist a professional real property manager and/or owner in the administration of income-producing real property, such as renting, leasing, and maintenance of physical facilities.

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, 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, valley 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. Each code requirement 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 relations of the elements, physical state of matter, solutions, oxidation-reduction, electrolysis and equilibirum. Laboratory exercises to strengthen and illus­trate concepts from lectures.

CHEM 1B (5)
GENERAL INORGANIC CHEMISTRY
3 Hrs. Lec. 6 Hrs. Lab.
Prerequisites: Chem 1A with a minimum grade of C. Detailed study of three branches of chemistry: thermodynamics, rates of reaction and equilibrium. Survey of selected groups from the periodic table, oxidation-reduction with respect to controlled reactions in the laboratory. Nuclear processes and introductory organic reactions. Laboratory exercises related to electrochemical study 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 preparation for Chem 1A. The course is recommended for those who desire a brief understanding of the elementary principles of chemistry. Not open to students who have completed Chem 1A or equivalent. Course may be offered as a Credit class.

CHEM 5A (4)
QUANTITATIVE ANALYSIS
2 Hrs. Lec. 6 Hrs. Lab.
Prerequisite: Chem 2A. 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 organic chemical compounds of carbon with special emphasis on the aliphatic compounds. The course includes an introduction to the aromatic compounds. Emphasis is given to the molecular orbital concept through 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 fire prevention and life safety provisions of the Uniform Building Code.
COURSES OF INSTRUCTION

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 Education courses to meet requirements for graduation 20 units

Physical Education and Mathematics, if required

Application for this degree must verify items 1 and 2 of the criteria with the instructor of Cosmetology and the Dean of Vocational-Technical Education. Check with Counseling Center for procedure to follow.

COS 50A (10)
INTRODUCTION TO COSMETOLOGY
360 Classroom Hrs.
Prerequisite: At least a 10th grade education or the equivalent. Theory of anatomy and bacteriology pertaining to cosmetology. Theory and practical training in chemical hair relaxing and hair pressing. Use of electrical equipment in all phases of cosmetology.

COS 50B (10)
INTRODUCTION TO COSMETOLOGY
360 Classroom Hrs.
Prerequisite: At least a 10th grade education or the equivalent. Theory of anatomy and bacteriology pertaining to cosmetology. Theory and practical training in chemical hair relaxing and hair pressing. Use of electrical equipment in all phases of cosmetology.

COS 52A (10)
INTERMEDIATE COSMETOLOGY
360 Classroom Hrs.
Prerequisite: At least a 10th grade education or the equivalent. The continued theoretical and practical training in all phases of cosmetology introduced in previous courses. Laboratory and desk 

COS 52B (10)
INTERMEDIATE COSMETOLOGY
360 Classroom Hrs.
Prerequisite: At least a 10th grade education or the equivalent. The continued theoretical and practical training in all phases of cosmetology introduced in previous courses. Laboratory and desk 

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. Dmr 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. Dmr Art 5B may be taken before Dmr 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: Dmr Art 20AB. A continuation of Dmr Art 20AB with further emphasis on fundamental acting skills, laboratory hours to be arranged.

DRM ART 22ABCD (1-1-1-1)
REHEARSAL AND PERFORMANCE
3 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)
BILINGUAL-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.
(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 visits 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/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. (Same as Psych 23)

**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 Psych 24 and 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. (Same as Psych 25)

**ECE 26 (3)**
**THE ART OF PARENTING**
3 Hrs. Lec.
(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. (Same as Psych 28)

**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. (Same as Psych 29)

**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. (Same as Psych 31)

**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.
EMERGENCY MEDICAL TECHNICIAN

EMT 1/A (5.5)
EMERGENCY MEDICAL TECHNICIAN 1/AMBULANCE
5 Hrs. Lec. 1.7 Hrs. Lab.
A course for individuals who will come in contact with sick or injured persons in an emergency situation. Although aimed primarily for ambulance attendants, the course would be of valuable assistance to all emergency service personnel in law enforcement, fire fighting, hospital emergency rooms and rescue units. Topics covered will include the role and responsibilities of the Emergency Medical Technician, medical-legal responsibilities and community resources for health and social care. Students will be taught to evaluate diagnostic signs and determine the extent of injuries. Procedures for dealing with life-threatening emergencies are presented: pulmonary and cardiopulmonary resuscitation, control of hemorrhage. Other medical and environmental problems, childbirth and lifting and moving techniques will also be considered. Students will receive clinical laboratory experiences in hospital emergency rooms and on ambulance calls. The course is approved by the California Department of Health for EMT training. One hundred and seventeen hours required for completion of course: 87 hrs. Lec. (five hrs. weekly); and 30 hrs. Lab.

EMT 1/A(R) (1.5)
EMERGENCY MEDICAL TECHNICIAN 1/AMBULANCE REFRESHER
1.5 Hrs. Lec. 0.4 Hrs. Lab.
Prerequisite: EMT 1/A and current CPR certification. A course for individuals whose EMT 1/A course completion certificates will expire within the next six months (certification may not be expired more than twelve months). The course will review life support measures, cardiopulmonary resuscitation and the use of emergency medical equipment and supplies. Specific problems related to Imperial County will be discussed. Thirty-six hours required for completion of course: 28 hrs. Lec.; 8 hrs. Lab.

EMT 1/F (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/F certificate does not meet this requirement. Topics covered include the role and responsibilities of the EMT, medicolegal 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 hours lecture (5 hrs. weekly) and 18 hours lab.

EMT 1/F(S)(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 study 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 re-certify as an EMT-1/A, which is a different course. 26 hours required for completion of course: 20 hrs. Lec.; 6 hrs. Lab.
ENGR 10 (3) ENGINEERING PROBLEMS
3 Hrs. Lec.
Prerequisite: Math 2 or Engr 61B. An applied course in geometry, algebra, trigonometry with applications to problems in engineering.

ENGR 11 (3) BASIC ELECTRICITY
2 Hrs. Lec. 3 Hrs. Lab.
Prerequisite: Math 2 or Math 3A. 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.

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; 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.

ENGR 15 (3) STATICS
3 Hrs. Lec.
Prerequisite: Phys 4A. Using vector algebra for analyzing and solving practical problems. Problems dealing with force systems, static equilibrium requirements, centroids, friction, moments of inertia of area and mass, centers of gravity, shear and moment diagrams.

ENGR 16 (3) DYNAMICS
3 Hrs. Lec.
Prerequisites: Engr 15 and Phys 4B. Kinematics of a particle, radius of gyration, dynamics of a particle, dynamics of rigid body in motion, motion and rotation, working energy impulse and momentum, simple harmonic motions and vibrations, conservation of linear and angular momentum.

ENGR 18A (3) PLANE SURVEYING
1 Hr. Lec. 8 Hrs. Lab.
Prerequisites: Math C, Engr 21, or equivalent. Principles of surveying, use of surveying instruments in the field, calculations, mapping and plotting.

ENGR 18B (3) ADVANCED SURVEYING
1 Hr. Lec. 6 Hrs. Lab.
Prerequisite: Engr 18A. Topographic surveying with study of triangulation calculations using transit-stadia, profile and cross section work, horizontal curves.

ENGR 19 (6) STATICS AND DYNAMICS
6 Hrs. Lec.
Prerequisites: Phys 4A and Math 3B. Using vector mechanics for analyzing and solving practical problems dealing with force systems, static equilibrium requirements, centroids, friction, moments of inertia of area and mass, centers of gravity, shear and moment diagrams. Kinematics of a particle, radius of gyration, dynamics of a particle, dynamics of a rigid body in plane motion, translation and rotation, working energy impulse and momentum, simple harmonic motions and vibrations, conservation of linear and angular momentum. (Same as Engr 15 and Engr 16).

ENGR 21 (3) TECHNICAL DRAWING
1 3/4 Hrs. Lec. 4 3/4 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 22 (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 23 (1) 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.

ENGR 53 (2) CONSTRUCTION MATERIALS
3 Hrs. Lec.
Basic theory of structures: materials characteristics, availability, economic factors, handling, transportation and storage. Properties and uses of wood, steel, concrete and masonry materials. Study of modern applications in building materials.

ENGR 55 (3) STRENGTHS OF MATERIALS
3 Hrs. Lec.
Prerequisites: Engr 21, Engr 61B (Same as Engr 15) and Engr 53. Fundamental stress and strain relationships, simple stresses, physical properties of engineering materials, stresses in thin walled cylinders, rivets and welded joint, design, investigation of stresses and deflections in beams, columns, torsional, impact, and repetitive loading stresses.

ENGR 61A (3) TECHNICAL MATHEMATICS
3 Hrs. Lec.
Prerequisite: Satisfactory score on mathematics placement test. Slide rule variation; algebra fundamentals; functions; exponents and radicals; linear quadratic functions; solution of triangles.
working energy impulse and momentum, simple harmonic motions and vibrations, conservation of linear and angular momentum.

ENGR 72A (3)
SURVEYING FOR ENGINEERING TECHNOLOGY
1 Hr. Lec. 5 Hrs. Lab.
Prerequisite: Engr 21 and 61A or equivalent, or permission of the instructor. Care and use of surveying instruments and accessories, differential leveling and measuring horizontal angles.

ENGR 72B (3)
SURVEYING FOR ENGINEERING TECHNOLOGY
1 Hr. Lec. 5 Hrs. Lab.
Prerequisite: Engr 72A. Calculations, field book entries, running traverses, mapping and plotting.

ENGLISH

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 (Room 208). Scores on this test are used to determine the students' reading skills. Students will be enrolled in the appropriate classes based on the sequence detailed below. Concurrent enrollment in composition and reading classes is recommended.

<table>
<thead>
<tr>
<th>Placement Grade</th>
<th>Equivalency Score</th>
<th>Composition Class Recommendation</th>
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<tbody>
<tr>
<td>below 6.0</td>
<td>6.0</td>
<td>Eng 58A</td>
</tr>
<tr>
<td>6.0 to 8.9</td>
<td>Eng 56A, 56B</td>
<td></td>
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<tr>
<td>9.0 to 10.9</td>
<td>Eng A, B</td>
<td></td>
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<tr>
<td>over 10.9</td>
<td>Eng 1A</td>
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<tbody>
<tr>
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<td>6.0</td>
<td>Eng 54A, 54B</td>
</tr>
<tr>
<td>6.0 to 8.9</td>
<td>Eng 50A</td>
<td></td>
</tr>
<tr>
<td>9.0 to 10.9</td>
<td>Eng 50B</td>
<td></td>
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<tr>
<td>over 10.9</td>
<td>Eng 12</td>
<td></td>
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</tbody>
</table>

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 A (3)
BASIC ENGLISH COMPOSITION
3 Hrs. Lec.
Prerequisite: Assignment by placement test and instructor recommendation. Preparation for Eng B. Provides development instruction in paragraph and short essay writing and in reading composition and analysis approaching the college level. The course follows in sequence from Eng 56B and is taught simultaneously with Eng B. Concurrent enrollment in Eng 50B is strongly recommended.

ENG B (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 A. Concurrent enrollment in Eng 50B is strongly recommended.

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 2 (3)
INTRODUCTION TO LINGUISTICS
3 Hrs. Lec.
Prerequisite: Eng AB, Eng 51 or 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 knowledge of language. Suitable for English speaking and bilingual students.

ENG 3 (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 3, MPP 3)

ENG 7 (3)
TECHNICAL AND REPORT WRITING
3 Hrs. Lec.
Prerequisite: Eng 51, Eng AB, 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. Satisfies part of the graduation requirements in communications.

ENG 8 (3)
ADVANCED COMPOSITION
3 Hrs. Lec.
Prerequisite: Eng 1A. Advanced expository prose, argumentation, description and the study of prose style. Offers an opportunity for learning to write through helping others write (tutoring).

ENG 9AB (3-3)
CREATIVE WRITING
3 Hrs. Lec.
Prerequisite: Eng 1B or permission of 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.

ENG 10 (3)
INTRODUCTION TO MOTION PICTURE PRODUCTION
3 Hrs. Lec. Plus production practice hours to be arranged
(Same as MPP 10)

ENG 12 (3)
RAPID READING AND STUDY SKILLS
3 Hrs. Lec. *1 Hr. Lab.
Designed to help adequate readers become superior readers. Recommended for college transfer students who wish to develop the efficient reading skills necessary for all types of college level reading. *Laboratory hour to be scheduled in the Reading/Writing Lab.

ENG 15 (3)
AMERICAN LITERATURE
3 Hrs. Lec.
Prerequisite: Eng 1B is recommended or permission of the instructor. A study of the works of major American writers.
ENG 16A (3)
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.

ENG 16B (3)
WORLD LITERATURE
3 Hrs. Lec.
Prerequisite: Eng 1B is recommended. Study of selected literature of Neo-classicism, Romanticism, Naturalism, Symbolism, and modern schools. Emphasis on literature other than American and English. May be taken before Eng 16A.

ENG 17A (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 the more important aspects of English literary history.

ENG 17B (3)
SURVEY OF ENGLISH LITERATURE
3 Hrs. Lec.
Prerequisite: Same as for Eng 17A. Close study of works of major English writers of the 19th and 20th centuries, with consideration of the more important aspects of English literary history. May be taken before Eng 17A.

ENG 18A BCDEF (3-3-3-3-3-3)
LITERATURE FOR PLEASURE
3 Hrs. Lec.
Prerequisite: Completion of Eng 56A or 50A, or the equivalent. A minimum 8th grade reading level is recommended. A general education course designed to encourage students to read for enjoyment and for an increased understanding of themselves and the world they live in. Students will read short stories, novels, plays, poetry and some nonfiction on certain themes, e.g., youth, love, horror, fantasy, the hero, the West. Oral participation will be emphasized and some writing will be required. Guest lecturers, films, and field trips will be included whenever possible. Course may be repeated for credit with different content.

ENG 20A BCDEF (3-3-3-3-3-3)
STUDIES IN LITERATURE
3 Hrs. Lec.
Examination of representative literary works of a major author, period, genre, or theme; or comparative study of literature and another field, e.g., film, theater, art, music, politics, social or behavioral science. Topics such as Modern Poetry, Modern Prose Fiction, Modern Drama, Classic Theater, Introduction to Shakespeare, Film and Literature, The Bible as Literature, Mythology and Folklore. May be repeated with different content.

ENG 25A BCDEF (3-3-3-3-3)
INTRODUCTION TO SHAKESPEARE
3 Hrs. Lec. ½ Hr. Lab.
Prerequisite: A Nelson-Denny Reading Test score of 11.0 or above. A demonstration of how Shakespeare can be enjoyable and interesting, as well as informative. The biography of Shakespeare, the environment of Elizabethan England, and the theatre in general will be explored briefly, followed by the television viewing and discussion of six full-length, professional quality productions from the works of the Master.

ENG 30A (3)
THE MEXICAN AMERICAN IN LITERATURE
3 Hrs. Lec.
Prerequisite: Eligibility for Eng 1A. Study of the contributions by Mexican Americans to all genres of literature. Course to be developed through the study of the Mexican American historical backgrounds, and by contrasting and comparing the works of Mexican Americans with their familiar Anglo American counterparts, as well as with the works of familiar Mexican authors. This course will concentrate on the cultural and literary heritage of the Mexican American. Conducted in English. (Same as Span 28A)

ENG 30B (3)
THE MEXICAN AMERICAN IN LITERATURE
3 Hrs. Lec.
Prerequisite: Successful completion of Eng 30A with emphasis on contemporary Mexican American writers. Conducted in English. Eng 30B may be taken before Eng 30A. (Same as Span 28B)

ENG 36 (3)
THE BIBLE AS LITERATURE
3 Hrs. Lec.
A study of the prose and poetry of the Bible.

ENG 40 (4)
BEGINNING ENGLISH AS A SECOND LANGUAGE
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.

ENG 40A (2)
BEGINNING ENGLISH AS A SECOND LANGUAGE
2 Hrs. Lec. ½ Hr. Lab.
Prerequisite: Designated score on placement test or permission of instructor. This course covers the first half of the student's work of Eng 40 (4 units) and is offered for the convenience of night students who cannot attend more than one night a week. This course will emphasize vocabulary building, conversational skills and listening comprehension. This course, together with Eng 40B, is equivalent to Eng 40. Not open to students who have completed Eng 41.

ENG 40B (2)
BEGINNING ENGLISH AS A SECOND LANGUAGE
2 Hrs. Lec. ½ Hr. Lab.
Prerequisite: Eng 40A or permission of instructor. This course covers the second half of the student's work of Eng 40 (4 units) and is offered for the convenience of night students who cannot attend more than one night per week. Satisfactory completion of Eng 40A and 40B is the equivalent to Eng 40. It qualifies the student to enroll in Eng 41A. Not open to students who have completed Eng 40.

ENG 41 (4)
INTERMEDIATE ENGLISH AS A SECOND LANGUAGE
4 Hrs. Lec. 1 Hr. Lab.
Prerequisite: Designated score on placement test or satisfactory completion of Eng 40. Eng 41 is an intermediate course which takes the student from simple present and past tense usage to more complicated grammatical structures. Basic skills for simple communication in English are also taught.

ENG 41A (2)
INTERMEDIATE ENGLISH AS A SECOND LANGUAGE
2 Hrs. Lec. ½ Hr. Lab.
Prerequisite: Designated score on placement test or satisfactory completion of Eng 40B. The course covers the first half of the semester's work of Eng 41 (4 units) and is offered for the convenience of night students who cannot attend more than one night per week. This course, together with Eng 41B, is equivalent to Eng 41. Not open to students who have completed Eng 41.

ENG 41B (2)
INTERMEDIATE ENGLISH AS A SECOND LANGUAGE
2 Hrs. Lec. ½ Hr. Lab.
Prerequisite: Satisfactory completion of Eng 41A. This course covers the second half of the semester's work of Eng 41 (4 units) and is offered for the convenience of night students who cannot attend more than one night per week. This course will emphasize vocabulary building, conversational skills and listening comprehension. This course, together with Eng 41A, is equivalent to Eng 41. Not open to students who have completed Eng 41.
and is offered for the convenience of night students who cannot attend class more than one night per week. Satisfactory completion of Eng 41A and 41B is equivalent to Eng 41 and qualifies the student to enroll in Eng 42 or Eng 42A. Not open to students who have completed Eng 41.

ENG 42 (4)
ADVANCED ENGLISH AS A SECOND LANGUAGE
4 Hrs. Lec. 1 Hr. Lab.
Prerequisite: Eng 41 or Eng 41A and 41B or equivalent. Advanced composition, grammar, and reading are emphasized. Satisfactory completion of this course qualifies the student for enrollment in Eng 56. This course satisfies part of the requirement in communications.

ENG 42A (2)
ADVANCED ENGLISH AS A SECOND LANGUAGE
2 Hrs. Lec. ½ Hr. Lab.
Prerequisites: Designated score on placement test or satisfactory completion of Eng 41 or Eng 41B. The course covers the first half semester's work of Eng 42 (4 units) and is offered for the convenience of night students who cannot attend more than one night per week. This course, together with Eng 42B, is equivalent to Eng 42. Not open to students who have completed Eng 42.

ENG 42B (2)
ADVANCED ENGLISH AS A SECOND LANGUAGE
2 Hrs. Lec. ½ Hr. Lab.
Prerequisites: Satisfactory completion of Eng 42A. This course covers the second half semester's work of Eng 42 (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 42A and Eng 42B is the equivalent of Eng 42 and qualifies the student to enroll in Eng AB or Eng 51. Not open to students who have completed Eng 42.

ENG 43B (3)
INTERMEDIATE ORAL ENGLISH FOR BILINGUALS
3 Hrs. Lec.
Prerequisites: To be taken concurrently with Eng 40 or by permission of instructor. A conversational course designed for the intermediate ESL student. 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.

ENG 43C (3)
ADVANCED ORAL ENGLISH FOR BILINGUALS
3 Hrs. Lec.
Prerequisites: To be taken concurrently with Eng 42 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. Satisfies part of the graduation requirement in communications.

ENG 45 (3)
BEGINNING VOCABULARY BUILDING AND SPELLING FOR ESL
3 Hrs. Lec.
Prerequisites: This course may be taken concurrently with Eng 40 or by permission of the instructor. A beginning level of vocabulary will be taught. Spelling techniques will be taught and vocabulary will be used both in oral and written sentences.

ENG 46 (3)
INTERMEDIATE VOCABULARY BUILDING AND SPELLING FOR ESL
3 Hrs. Lec.
Prerequisites: Eng 41 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.

ENG 47 (3)
VOCABULARY BUILDING FOR BILINGUALS
3 Hrs. Lec.
Prerequisites: Eng 46, Eng 41, 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.

ENG 49 (3)
READING DEVELOPMENT FOR BILINGUALS
3 Hrs. Lec. *1 Hr. Lab.
Prerequisite: Assignment by placement test and/or completion of Eng 43C and Eng 47. Course is designed to develop reading efficiency of bilingual students. It will include a thorough analysis of vocabulary. Individual interests and ability to read play a decided role in each student's progress. *Laboratory hour to be scheduled in the Reading/Writing Lab.

ENG 50A (3)
READING DEVELOPMENT
3 Hrs. Lec. *1 Hr. Lab.
Prerequisite: Eligibility by placement test. A course for the student at the intermediate reading level needing intensive instruction in vocabulary comprehension. Items covered will include phonics and word analysis, review of syllabication, dictionary skills, prefixes, suffixes, and individualized vocabulary and rate building. Follows in sequence from Eng 54B. Taught simultaneously with Eng 50B. *Laboratory hour to be scheduled in the Reading/Writing Lab.

ENG 50B (3)
READING DEVELOPMENT
3 Hrs. Lec. *1 Hr. Lab.
Prerequisite: Eligibility by placement test. A course at the upper intermediate level designed to refine those skills designated in Eng 50A. Includes additional instruction in study skills, outlining, previewing, summarizing and critical reading. Taught simultaneously with Eng 50A. *Laboratory hour to be scheduled in the Reading/Writing Lab.

ENG 51 (3)
The COMMUNICATION PROCESS
3 Hrs. Lec.
Prerequisite: Assignment by placement tests or teacher recommendation. Designed to familiarize the student with everyday communication processes and to develop his 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. This course (or Eng 1A) must be taken in partial fulfillment of the IVC graduation requirement in communications.

ENG 52AB (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.

ENG 53AL (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. Individualized 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.

ENG 54A (3)
INTRODUCTORY DEVELOPMENTAL READING
3 Hrs. Lec. *1 Hr. Lab.
Prerequisite: Assignment by placement test and recommendation of the instructor. Instruction in the beginning reading for those students who have not yet mastered the basic skills of phonics and word analysis. Taught simultaneously with Eng 54B. *Laboratory hour to be scheduled in the Reading/Writing Lab.

ENG 54B (3)
INTRODUCTORY DEVELOPMENTAL READING
3 Hrs. Lec. *1 Hr. Lab.
Prerequisite: Assignment by placement test and recommendation of the instructor. A continuation of the basic reading skills presented in Eng 54A with additional work in phonics, comprehension, word analysis, and vocabulary building for intermediate level reading (Eng 50A). Taught simultaneously with Eng 54A. *Laboratory hour to be scheduled in the Reading/Writing Lab.

ENG 55AB (1-1)
SPELLING
1 Hr. Lec.
Diagnosis of specific spelling problems and prescription of remedies; investigation of the basic spelling rules.

ENG 56A (3)
WRITING FUNDAMENTALS
3 Hrs. Lec.
Prerequisite: Assignment by placement and instructor recommendation. Preparation for 56B. Intensive instruction in grammar and punctuation and the writing of short (75-100 word) paragraphs. Designed for the student needing to acquire basic writing skills and to overcome language transfer interference. Follows in sequence from Eng 42. Taught simultaneously with Eng 56B. Concurrent enrollment in Eng 50A is strongly recommended.

ENG 56B (3)
WRITING FUNDAMENTALS
3 Hrs. Lec.
Prerequisite: Assignment by placement and instructor recommendation. Preparation for Eng A or Eng 51. A review of grammar and punctuation and instruction in the writing of paragraphs and topic sentences. Designed for the student needing to review basic writing skills. The course follows in sequence from, and is taught simultaneously with, Eng 56A. Concurrent enrollment in Eng 50A is strongly recommended.

ENG 57 (1)
LIBRARY RESOURCE
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 area(s) of interest.

ENV SCI 5 (3)
MAN AND HIS ENVIRONMENT
3 Hrs. Lec.
The study of natural resources vital to the man's existence. Emphasis on composition of the physical environment and problems associated with contamination of air, water, and soil. (Same as Ag 5)

FIRE SCIENCE

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 firemen in a volunteer service.

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 manpower management from the 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 81 (3) INTRODUCTION TO FIRE SCIENCE
3 Hrs. Lec.
Fire suppression organization; fire suppression equipment; characteristics and behavior of fire; fire hazard properties of ordinary materials, building design and construction; extinguishing agents; basic fire fighting tactics; public relations.

FIRE SCI 82 (3) FIRE FIGHTING TACTICS AND STRATEGY
3 Hrs. Lec.
Review of fire chemistry, equipment, and manpower; basic fire fighting tactics and strategy; methods of attack; pre-planning fire problems.

FIRE SCI 83 (3) FIRE HYDRAULICS
3 Hrs. Lec.
Prerequisite: Completion of Math 51 or satisfactory score on Mathematics Placement Test. Review of basic mathematics; hydraulic laws and formulas as applied to the fire service; application of formulas and mental calculation to hydraulic problems; water supply problem; underwriters' requirements for pumps.

FIRE SCI 84 (3) FIRE APPARATUS AND EQUIPMENT
3 Hrs. Lec.
Driving laws, driving technique, construction and operation of pumping engines, ladder trucks, aerial platforms, specialized equipment, apparatus maintenance.

FIRE SCI 85 (3) FIRE COMPANY ORGANIZATION AND PROCEDURE
3 Hrs. Lec.
Review of fire department organization; fire company organization; the company officer; personnel administration; communication; fire equipment; maintenance; training; fire prevention; fire fighting company; fire fighting capability; records and reports.

FIRE SCI 86 (3) RESCUE PRACTICES
3 Hrs. Lec.
Rescue practices, the human body, emergency care of victims, childbirth, artificial respiration, toxic gases, chemicals and diseases, radioactive hazards, rescue problems, and techniques.

FIRE SCI 87 (3) FUNDAMENTALS OF FIRE PREVENTION
3 Hrs. Lec.
Prerequisites: Fire Sci 81 or employment with a fire protection agency. Fire prevention organization; inspection, surveying and mapping procedures; recognizing the hazard; engineering a solution; enforcing the solution; public relations.

FIRE SCI 90 (2) PUMP OPERATION 1
2 Hrs. Lec.
Prerequisite: Suggested completion of Fire Sci 83 or Fire Sci 84. 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 1
2 Hrs. Lec.
Prerequisite: Present firefighter status, either paid or volunteer. This course is designed for the fire and police arson investigator to successfully carry out responsibilities in arson detection and investigation.

FIRE SCI 94 (2) FIRE COMMAND 1
2 Hrs. Lec.
Prerequisite: Present firefighter status, either paid or volunteer. A course designed to provide Fire Company Officers with information and experience in command and control techniques used at the scene of an emergency. The course emphasizes decision making, the act of commanding, the authority or right to command, the personnel organization structure or area under an individual commander, and the pre-planning and training requirements for effective performance as an officer.

FIRE SCI 95 ABCDE (1/2-1/2-1/2-1/2-1/2) OIL FIRE CONTROL SCHOOL 1
2 Hrs. Lec. 8 Hrs. Lab.
This course provides students with general information, techniques and strategies in dealing with flammable liquids and gases. Students are provided with particular exercises in controlling and then in extinguishing flammable liquid and gas fires at selected burn sites under controlled supervision.

FRENCH

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. 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 Foreign Language Department for further information.

The last year course taken by a student in the high school language sequence 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.
This 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 one-half 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. 1/2 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 1B (2) ELEMENTARY FRENCH
2 Hrs. Lec. 1/2 Hr. Lab.
Prerequisite: Fr 1B. A continuation of Fr 1B. 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 one-half hour of individual language laboratory by arrangement.

FR 2A (2) ELEMENTARY FRENCH
2 Hrs. Lec. 1/2 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 Fr 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. Students 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, Guadalupe. Emphasis on the 20th century. Conducted in English. (Same as Hum 41)

FR 51 (3)
FRENCH CULTURE, CUISINE AND CONVERSATION
3 Hrs. Lec.
An introduction to French culture, cuisine and conversation around the world. Discussion, demonstration and preparation of native French dishes. Includes introduction and practice in basic phrases and vocabulary for travel as well as travel tips presented by lecture, guest speakers, and multi-media illustration: Field trip to French restaurant. Class materials fee required for food and field excursion.

FR 60ABC (1-1-1)
LANGUAGE LABORATORY
2 Hrs. Lab.
(Same as Eng 60AC and Span 60AC)

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 the major regions in the world. May be taken before Geog 1.

GEOG 3 (3)
ECONOMIC GEOGRAPHY
3 Hrs. Lec.
The geography of commercial productivity. Distribution of production as related to climate, surface features, soils, land supply and market areas, and the routes along which products move to consuming areas.

GEOL 1A (4)
PHYSICAL GEOLOGY
3 Hrs. Lec. 3 Hrs. Lab.
Prerequisite: One year of high school science or permission of instructor. An introduction to the physical sciences of the earth: its interior; volcanic and geysers; rocks and rock formations; mineral resources, natural vegetation, and the history of the larger topographic features.

GEOL 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. Emphasis on the fossil record in the rocks from ancient to present. The age of invertebrates; age of dinosaurs and other reptiles; age of birds; the age of mammals. (Same as Zool 10)
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| **GEOL 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 geography. 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. |
| **GEOL 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. |
| **GEOL 12L (1)**  
**INTRODUCTION TO GEOLOGY LAB**  
3 Hrs. Lab.  
Prerequisites: 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 a historical perspective. Emphasis on past events in Imperial Valley. A general education course closed to those who have credit in Geol 1B. |
| **GEOL 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. |
| **GEOL 14 (3)**  
**GENERAL PALEONTOLOGY, DINOSAURS, SABRETOOTH**  
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. |
| **GER 1 (4)**  
**ELEMENTARY GERMAN**  
4 Hrs. Lec. 1 Hr. Lab.  
Prerequisites: Initial exposure to the German language. The student must plan for an additional half hour of individual language laboratory. |
| **GER 1A (2)**  
**ELEMENTARY GERMAN**  
2 Hrs. Lec. ½ Hr. Lab.  
Beginning course of graded lessons acquainting the student with the basic structure and pronunciation through practice in speaking, reading and writing. This course is the first half of the first semester of Ger 1. Completion of Ger 1A and Ger 1B is the equivalent of Ger 1, 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. Students 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 skills of listening, comprehension, speaking, reading and writing with control of the 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 examination and consent of instructor. Conversational skills developed through oral drills, laboratory assignments and guided conversations on assigned topics. Practice in the spoken language; practical and diplomatic vocabulary, simple dialogues and plays. Meets German conversation requirements for enrollment 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 1 (3)**  
**FUNDAMENTALS 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 2 (3)**  
**SOCIOLOGY OF AGING**  
3 Hrs. Lec.  
The interations 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.  
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 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 11AB (2-2)
GERONTOLOGY PRACTICUM
1 Hr. Lec. 1 Hrs. Lab.
Prerequisite: 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.

GRAPHIC ARTS

G.A. 10 (2)
GRAPHIC COMMUNICATION I
1 Hr. Lec. 3 Hrs. Lab.
Prerequisite: 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, paste-up, 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 arts field. The 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
3 Hrs. Lec.
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 problem solving, including standard trouble shooting procedures.

G.A. 21 (3)
OFFSET PRINTING II
2 Hrs. Lec. 1 Hr. 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 PLATEMAKING
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 trouble-shooting, 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.

1. 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, home 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 own homes within the community.

5. Patient Education Technician:
   - For employment in a hospital or health agency in the audio-visual department so as to assist with patient education.

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 an application. Admission requirements include a health examination, writing of the college placement tests and orientation with a member of the Health Aide faculty. Applicants with prior or 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.

CURRICULUM

<table>
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<tr>
<th>HA 15A, HA 15B, HA 15C, HA 15D, HA 15E</th>
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<tr>
<td>Psych 5 (or Psych 1A, if eligible)</td>
<td>Psych. of Effective Behavior ......</td>
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<tr>
<td>Eng 51 (or Eng 1A, if eligible)</td>
<td>The Communication Process ..........</td>
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<td>P.E.</td>
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COURSES OF INSTRUCTION

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, Calexico Hospital, Pioneers Memorial Hospital, El Centro Community Hospital (approximately 2 weeks each facility). Weekly lectures will continue within the specialty area. Students 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 clinical laboratory experiences at Im an Valley Center for Exceptional Children (2 weeks), Activity Center (2 weeks), and the Community Living and Respite Care Center (2 weeks). One week will be devoted to field trips to other area agencies.

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): Students will receive supervised clinical laboratory experience at the Imperial Valley Mental Health Services - In-Patient Hospital, Day Hospital, Mobile Team and Imperial Manor. Weekly lectures will continue within the specialty area.

HA 15E (9)
PATIENT EDUCATION TECHNICIAN
3 Hrs. Lec. 18 Hrs. Lab.
For general overview of course, see HA 15A, paragraph 1.

Patient Education Technician specialty of the Health Aide course (9 weeks): Students will have classes in library technology including setting up and maintaining equipment such as video tape, motion picture projector and filmstrip machines. Audiovisual materials available in Imperial County as well as how/what to obtain from other resource people/places will be discussed as will the organization, cataloging and distribution of AV materials. Included will be classes in disease conditions with emphasis on prevention and rehabilitation. Case management, family counseling, role of allied disciplines and resources available will be discussed as they relate to the illness being studied. Home visiting will be a part of the clinical experience. The development of creative skills in presenting educational material to patients and the reinforcement and follow-up teaching done by licensed nurses will be stressed. The ordering and categorizing of patient teaching supplies, office skills (with emphasis on organization and filing), communication skills will be included.

Nursing - Continuing Education

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.

HA 38 (1 1/3-3)
THIS YEAR'S ISSUES IN HEALTH
1 1/3 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 and permission of instructor. (Same as RN 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 attitudes and practices. Includes the study of first aid and the relationship of alcohol, narcotics, and smoking to health, and the 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 and emergency childbirth. Course shall qualify students for the Standard or Advanced Red Cross First Aid Certificate.

HE 3 (2)
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 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 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.

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.

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 2 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 1 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)
COURSES OF INSTRUCTION

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 wondering, 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.

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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)

HUMAN RELATIONS

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” concepts in people-to-people services. These services are used by youth and adult correctional institutions, welfare and vocational rehabilitation agencies, mental hospitals, state employment centers, educational institutions and child care centers.

HR 8 (3)
PERSONAL AND CAREER DEVELOPMENT
3 Hrs. Lec.
This course examines the process a student would follow in making a realistic career decision. Students planning to enter professions involving helping relationships such as education, social work, counseling, psychology, community work, and related areas, in addition to students who are undecided about their own future would profit from the course. Self-awareness will be appraised by testing and discussing interests, aptitudes, abilities, limitations, needs and life goals. Career awareness will be facilitated by exploring the world of work in terms of occupational outlook, wages, training required, opportunities for advancement and lifestyle. Material testing fee payable during first week of instruction. (Same as Psych 8)

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 situations. The course is designed to assist the student in gaining knowledge for the development of skills to deal with the interviewee in all kinds of situations. Theories of 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 small group leadership leading to effectiveness in interpersonal relations 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, Sociol 1, 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 mental 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 13AB (3-3)
THE PARAPROFESSIONAL IN COUNSELING
2 Hrs. Lec. 3 Hrs. Lab.
(Same as Psych 13AB)

HR 61 (1)
COLLEGE STUDY TECHNIQUES
1 Hr. Lec.
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.

HR 66 (3)
STUDENT PERSONNEL SERVICES IN HIGHER EDUCATION
3 Hrs. Lec.
Comprehensive study of organization, administration and evaluation of Student Personnel Services in higher education. Particular emphasis in services afforded in the community college.

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 48AB or 88AB (1-5)
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 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 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. ½ 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 Ita 1A and 1B is equivalent to a regular 4-unit 1-semester college level Italian course.

ITAL 1B (2)
ELEMENTARY ITALIAN
2 Hrs. Lec. ½ Hr. Lab.
Prerequisite: Ita 1A. A continuation of Ita 1A. Grammatical emphasis on the future and present perfect tense and the imperative mode. The sequence of Ita 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. 1 Hr. Lab.
Prerequisite: Satisfactory performance in Eng 1A or recommendation of Eng instructor. Typing skills recommended. Introduction to techniques of compiling and writing general news and feature stories. Method pages, make up and functions of a newspaper are also included.

JRN 2ABC (4-4-4)
ADVANCED NEWS AND FEATURE WRITING
3 Hrs. Lec. 4 Hrs. Lab.
Prerequisite: Jn 1 or equivalent. Continuation of Jn 1, with the addition of editorial writing. Includes an introduction to the principles and techniques of newspaper production.

JRN 3 (3)
MASS COMMUNICATIONS
3 Hrs. Lec.
Survey of mass media; their interrelationships, their problems and responsi bilities. Relationship of the mass media to the individual.

JRN 4 (3)
JOURNALISTIC ISSUES
3 Hrs. Lec.
Prerequisite: A course for advanced journalism students. Study of issues concern to working journalists, such as newsmen's privilege, libel, gag rules, 1 amendment vs 6th amendment free doms.

JRN 5 (3)
INTRODUCTION TO PHOTOGRAPHY
2 Hrs. Lec. 3 Hrs. Lab.
(Same as Ph 5)
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| **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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<th><strong>LAW ENFORCEMENT</strong></th>
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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 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.
Prerequisite: LE 21 or concurrent enrollment. The study of traffic control and vehicle code problems.

| **LAW ENF 26 (3)**
TRAFFIC ACCIDENT INVESTIGATION
3 Hrs. Lec.
Prerequisite: LE 21 or concurrent enrollment. 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.
Prerequisite: LE 21 or concurrent enrollment. 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.
Prerequisite: 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.
Prerequisite: LE 21. 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 juvenile offenders and victims, prevention and representation of delinquency, diagnosis and 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 roles of the administration of justice practitioners and their agencies. Through interaction and study the student will become aware of the inter-relationships and role 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 positive relationships between members of the system and the public.

| **LAW ENF 39 (3)**
ARREST AND FIREARMS
3 Hrs. Lec.
Prerequisites: Active reserve or full-time peace officer. Designed to satisfy the curriculum standards of the Commission on Peace Officer Standards and Training as required by Penal Code Section 832 for peace officers; includes laws of arrest, search and seizure, methods of arrest, discretionary decision making and where applicable, use of and carrying of firearms; mandatory for all peace officers who do not possess a basic certificate awarded by the Commission on Peace Officer Standards and Training.

| **LAW ENF 40 (1)**
ADVANCED OFFICERS COURSE
1 Hr. Lec.
Prerequisite: Permission of instructor. This course is designed to keep officers informed of new laws, new court decisions, changes in law enforcement policy, new concepts of police technology, advanced techniques, police-community relations, law enforcement ethics in maintaining police integrity and such other refresher training as may be necessary.

| **LAW ENF 41 (3)**
MASS SOCIOLOGY AND COLLECTIVE BEHAVIOR
3 Hrs. Lab.
(SAME AS SOC 41)

| **LAW ENF 42 (%)**
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. Eight hours 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 the correct manner of performing their assigned tasks.

**LAW ENF 44 (6)**
RESERVE OFFICERS CLASS LEVEL I
6 Hrs. Lec.
Prerequisite: Level II or permission of instructor. A basic overview course in the correct manner of performing their assigned tasks.

**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: Full time peace officer or a Level I Reserve Officer. An in-depth study of the substantive law commonly encountered by the municipal, county, or state police officer. The scope of the course includes misdemeanor and felony violations of the criminal statutes.

**LEGAL ASSISTANT**

**LA 1 (3)**
INTRODUCTION TO LEGAL ASSISTANTS
3 Hrs. Lec.
Introductory course in formalizing the career of the legal assistant. An introduction to law, social forces and the law, comparison of the role of the legal assistant and the lawyer, and an introduction to legal terminology and bibliography. (Includes law office management and legal ethics.)

**LA 2 (3)**
LIBRARY SCIENCE AND LEGAL WRITING
3 Hrs. Lec.
Prerequisite: LA 1. An introductory course in working in the legal library. Research and drafting and writing legal documents.

**LA 3 (3)**
CIVIL PROCEDURES I
3 Hrs. Lec.
Prerequisites: LA 1 and LA 2 or concurrent enrollment. An introductory course in basic civil procedures, court systems, procedures as they apply to the principles of federal, state and civil laws.

**LA 5 (3)**
TORT LAW
3 Hrs. Lec.
Prerequisites: LA 1 and LA 2 or concurrent enrollment. A study of the fundamental principles of the law of torts, an examination of the techniques of investigation involved in the lawyer's handling of tort claims. A study of the various forms of pleadings involved in tort claims.

**LA 6 (3)**
CRIMINAL LAW
3 Hrs. Lec.
Prerequisites: LA 1 and LA 2 or concurrent enrollment. Structures, definitions, and the most frequently used sections of the Penal Code and other criminal statutes. Elements of crimes and defenses.

**LA 7 (3)**
CORPORATIONS AND TAXATION
3 Hrs. Lec.
Prerequisites: LA 1 and LA 2 or concurrent enrollment. Principles of agency, principal and third parties, formation and management of California corporations, the rights and liabilities of stockholders, and corporate reorganization and dissolution, regulations of state and federal government relating to income, deductions, exemptions, depreciation, and capital gains and losses.

**LA 8 (3)**
CIVIL DISCOVERY AND EVIDENCE
3 Hrs. Lec.
Prerequisites: LA 1 and LA 2 or concurrent enrollment. An examination of the rules of civil evidence and the admissibility of such evidence in court. Depositions, interrogations, admissions, notices to produce, and related rules of discovery and evidence.

**LA 9 (3)**
FAMILY LAW
3 Hrs. Lec.
Prerequisites: LA 1 and LA 2 or concurrent enrollment. Law and procedure relative to marriage, community property, dissolution, parent and child relationships - including adoption.

**LA 10 (3)**
BANKRUPTCY — CREDITOR/DEBTOR
3 Hrs. Lec.
Prerequisites: LA 1 and LA 2 or concurrent enrollment. A study of the bankruptcy laws and procedures. A study of creditors' rights, debtors' exemptions, and secured transactions.

**LA 11 (3)**
REAL ESTATE LAW FOR LEGAL ASSISTANTS
3 Hrs. Lec.
Prerequisites: LA 1 and LA 2 or concurrent enrollment. Legal background property ownership, with special reference to the law of California as it applies to community property. Conveyance deeds, trust deeds, mortgages, homesteads and estates, etc.

**LA 12 (3)**
WILLS — TRUSTS — PROBATE
3 Hrs. Lec.
Prerequisites: LA 1 and LA 2 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 library services and their organization. It is designed for students interested in employment as library technicians. Basic philosophy of library services, tools, and techniques. 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 services 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 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.

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. Includes the study of inequalities, limits and continuity, differentiation of algebraic and transcendental functions, definite integrals, applications, parametric equations, arc length and some review of conics.

MATH 3B (5)
ANALYTIC GEOMETRY AND CALCULUS
5 Hrs. Lec.
Prerequisite: Math 3A. Topics include polar coordinates, vectors in a plane, formulas and methods of integration, applications, solid analytic geometry, vectors in three dimensions and elements of the infinite series.

MATH 4 (4)
CALCULUS AND DIFFERENTIAL EQUATIONS
5 Hrs. Lec.
Prerequisite: Math 3B. Partial differentiation, multiple integration, ordinary differential equations, applications, and elements of linear algebra.

MATH 6 (3)
LINEAR ALGEBRA
3 Hrs. Lec.
Prerequisites: Math 3A and Math 3B with a grade of C or better. The course covers systems of linear equations, matrices and determinants, matrix algebra, eigen values, vector spaces, and linear transformations. Physical applications will be considered when appropriate.

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 real 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 courses in business. To provide some understanding of the ideas from modern mathematics which are so important in this computer age. Topics included are logic, sets, counting, probability, vectors and matrices, mathematics of finance, linear 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 applications. Includes course work in the theory of the structure of arithmetic and algebra of the real number system. Not 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. 2 Hrs. Lab.
A basic course in mathematics designed to meet the needs of students enrolled in the following vocational programs: automotive technology, welding, agricultural engineering, and physically limited. The course will cover applied mathematics for the shop student, factoring, fractions, measuring devices, basic geometry, measurement of areas and volumes, board measure, metric measurement. Satisfies the Imperial Valley College mathematics competency requirement as demonstrated by appropriate examination and is not open to students who have completed Math 51. (Same as Ag 50, Auto Tech 50, PL 50 and Weld 50)

MATH 51 (3)
BASIC MATHEMATICS
3 Hrs. Lec.
Brief review of arithmetic including fractions, decimals, per cent, square root, and an introduction to algebra. This course is not open to students having satisfactory scores on mathematics placement tests.

MATH 52 (1)
THE METRIC SYSTEM
1 Hr. Lec.
A brief introduction to the history of the metric system. Advantages and popularity of the International System of Units (SI). Metric units include those for length, area, volume, capacity, weight, temperature, and others. Conversions to and from the metric system are presented.

MOTION PICTURE PRODUCTION

MPP 3 (3)
INTRODUCTION TO FILM HISTORY AND CRITICISM
2 Hrs. Lec. 2 Hrs. Lab.
(Same as Eng 3, Hum 3)

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 filmmaking process in 8mm, including scripting, shooting and editing. The college will provide the necessary equipment. Students supply materials. (Same as Eng 10)

MPP 11 (3)
INTERMEDIATE MOTION PICTURE PRODUCTION
3 Hrs. Lec.
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)
ADVANCED MOTION PICTURE 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 will produce a five to 10-minute motion picture. Students supply materials.

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 and 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 the 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 of 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 17ABCD (2-2-2-2-2)
CHAMBER SINGERS
2 Hrs. Lec. 1 Hr. Lab.
Prerequisites: Mus 15A or permission of the instructor. A performance organization presenting music of all styles sacred and secular, a cappella and accompanied. A minimum of six outside performances required each semester.

MUS 18ABCD (2-2-2-2-2)
CHAMBER ORCHESTRA
2 Hrs. Lec. 1 Hr. Lab.
Prerequisite: Permission of instructor. A performance organization specializing in 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 19ABCD (2-2-2-2-2)
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 22A (2)
INTRODUCTION TO PRINCIPLES AND PRACTICES OF CONDUCTING
2 Hrs. Lec. 1 Hr. Lab.
Prerequisites: Permission of instructor or Mus 7 or Mus 8A and 9A. Techniques of instrumental and vocal conducting. Preparation — rehearsal and performance procedures for the conductor.

MUS 22B (2)
CONDUCTING PRINCIPLES AND PRACTICES
2 Hrs. Lec. 1 Hr. Lab.
Prerequisite: Mus 22A. Techniques involved in standard conducting problems. Preparation — rehearsal and procedural problems encountered in conducting music.

MUS 25ABCD (2-2-2-2-2)
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 27ABCDDEF (2-2-2-2-2-2)
CONCERT BAND
2 Hrs. Lec. 1 Hr. Lab.
Prerequisites: 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 28ABCDDEF (2-2-2-2-2)
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 29ABCD (2-2-2-2-2)
ESTUDIANTINA
1 Hr. 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 materials of music and the major forms of music literature. Emphasis placed on the skills and understanding necessary for lifelong music listening experiences.

MUS 31 (3)
INTRODUCTION TO TWENTIETH-CENTURY MUSIC
3 Hrs. Lec.
An introduction to Twentieth-Century music exploring its nineteenth-century heritage, the first attempts to utilize unusual musical materials, the shift in musical philosophy, as composers turned away from the nineteenth-century concept of music as an expression of subjective will and moral force to more objective functions, the invention of new instruments, and unusual ways of playing ordinary instruments.
COURSES OF INSTRUCTION

MUS 32ABCD (1-1-1-1)
APPLIED MUSIC
1 Hr. Lec. .5 Hr. Lab. to be arranged
Prerequisites: Declared music major, regularly enrolled in the College and be 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 music within a particular performing medium. One section meeting per week on campus, in addition to private instruction. As 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 of class per week on campus for performance as scheduled and turn in weekly lesson attendance form.

MUS 63ABCD (⅓-⅓-⅓-⅓)
PEP BAND
2 Hrs. Lab.
This course will provide music students with an understanding of the ways music fulfills symbolic and ceremonial needs of society together with procedures and processes appropriate to maintaining music organizations focused upon meeting these needs.

MUS 64 (2)
COLLEGE-COMMUNITY BAND
2 Hrs. Lec. 1 Hr. Lab.
A performance organization specializing in a wide range of literature for the wind band. The primary objective will be to provide the continuing music 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 1A or Astron 1.

NURSING - ASSOCIATE DEGREE

The Associate Degree Nurse Program (four semesters in length) prepares the student to receive the Associate of Science degree from the College and be eligible to write the examination given by the California Board of Registered Nursing to obtain licensure as a registered nurse. The program, which is also accredited by the National League for Nursing, prepares men and women to give direct nursing care to patients in hospitals, clinics, and similar community health-care agencies. Courses in general education and nursing are taken at the college campus. Nursing laboratory experiences are offered at selected area hospitals and other health agencies under the guidance of nursing faculty members. Transportation to these agencies is the responsibility of the student.

Students are admitted once a year in September. A Nursing Admissions Committee will review all applications. Early application (previous to February 1) is recommended, since the number of students who can be admitted is limited. Applicants are accepted according to the date that application is complete. Admission requirements include high school graduation (or its equivalent), a year of high school chemistry and biology (or their college equivalent), completion of English 1A and Psychology 1A in college, completion of Math 51 (as determined by college placement tests), physical and dental examinations (including specified immunizations). Applicants with prior education in nursing (R.N., V.N. or Health Aide) may apply for credit by examination and/or advanced placement. This will be determined on an individual basis.

For continuation in and successful completion of the program, a grade of C or better is required in each of the Board of Registered Nursing required courses: nursing, anatomy, physiology, microbiology, sociology, English, communication elective and the two psychology courses. An overall 2.00 grade point average (C=2.00) must be maintained in order to enroll in each succeeding semester of the program. The college graduation requirements in health education are waived for A.D.N. students. Required courses in microbiology, anatomy, and physiology taken more than 5 years previous to enrollment and required courses in sociology and psychology taken more than 10 years previous to enrollment are to be repeated. The nursing faculty reserves the right to recommend that a student be asked to withdraw from the nursing program at any time if academic, clinical, health or personal standards are not maintained.

CURRICULUM

First Year

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<td>Soc 1</td>
<td>Princ. of Sociology ...</td>
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<td>Phys. Ed., if required ...</td>
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<td>Bio 21</td>
<td>Gen. Microbiology ...</td>
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Second Year

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**Must be successfully completed before registration of ADN 2. Anatomy and Human Physiology may be substituted. If student elects to do these, two courses must be completed before entering the Associate Degree Nursing Program.

**Psych 20 may be substituted.

**First year courses must be completed before registration of ADN 3.

***Students expecting to transfer to a State college are advised to take 6 units of "American Institutions" electives instead.

ADN 1 (8)
ASSOCIATE DEGREE NURSING
4 Hrs. Lec. 12 Hrs. Lab.
Prerequisite: Admission to ADN Program. Introduction to nursing including role and functions of the nurse in health and illness. Theory and integrated clinical experiences in basic nursing principles and measures which meet basic needs common to all individuals of all ages from infancy to senescence. Principles of growth and development and men health concepts introduced. Personal development, understanding of self and therapeutic nursing roles are studied.

Community resources for health care, legal, cultural, social, ethical responsibilities of the nurse, communicating skills, pharmacology, nutrition in health and disease are introduced and then integrated throughout nursing program.

ADN 2 (8)
ASSOCIATE DEGREE NURSING
4 Hrs. Lec. 12 Hrs. Lab.
Prerequisite: ADN 1. Using the concepts of growth and development, physiological and psychological responses to trauma and disease are studied as are common health problems encountered by individuals of all ages. Special needs of individuals before, during and after surgery included. Interrelated emotions and organic disease introduced. Experiences concurrent in hospitals and other community agencies. Experience in participating in the interdisciplinary psychiatric team with emphasis on the role of the nurse interacting with individuals or groups with mental health problems.

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
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, psycho-social, and nursing principles, attitudes and skills are developed to plan, implement, and evaluate comprehensive nursing care. Common and complex health problems interfering with the needs of adults and children are studied. Special consideration is given to aging and the aged, and to cultural/ethnic and sexual aspects of care. Clinical experiences in the acute and long term hospitals are concurrent, and opportunity is given to participate in leadership roles and group nursing management.


ADN 80 (2) REVIEW FOR RN LICENSURE 4.44 Hrs. Lec. Prerequisite: ADN graduate or equivalent. This course is designed to prepare students to take the State Board licensure examinations. The course will cover the five major areas of nursing: Pediatric, maternal, psychiatric, medical and surgical nursing. Also included: Psychology of test-taking and methods of relaxation. Emphasis will be on assessment, intervention and rationale of nursing action.

For Licensed Vocational Nurses

California law provides that a Licensed Vocational Nurse shall be eligible to apply for examination for licensure as a registered nurse when certain courses (totaling 30 units of credit) have been completed in an Associate Degree Nursing Program accredited by the Board of Registered Nursing. Applicants are advised to confer with the Nursing Director concerning the details of the Board of Registered Nursing requirements.

In addition to the above, periodically (when sufficient students indicate interest) a special program will be offered for a group of LVN's who wish to complete the above-mentioned requirements.

TN 10 (8) TRANSITIONAL NURSING I 4.4 Hrs. Lec. 10.6 Hrs. Lab. Prerequisites: VN 56 or equivalent, Bio 21, Anat 10 or Physio 1. Introduction to the role of the registered nurse in contemporary society including the control forces of legal and ethical responsibilities of the registered nurse. Theory and integrated clinical experiences in meeting the needs of healthy and ill individuals based on principles from the natural and social sciences. Self-awareness, personality development, group process and therapeutic use of self are studied. Emphasis placed on the changing role of the nurse from vocational nursing practice to registered nursing practice. (Course is taught as 8 hours lecture and 19 hours laboratory per week during a 10-week summer session for a total of 80 hours lecture and 190 hours laboratory.)

TN 11 (14) TRANSITIONAL NURSING II 8 Hrs. Lec. 18 Hrs. Lab. Prerequisite: TN 10. Through the processes of nursing, managing and self-development, the student is guided through theory and clinical experiences to plan, carry out and evaluate comprehensive nursing care for individuals of all ages. Practice is offered in nursing leadership, rehabilitation and health teaching in a variety of settings. Emphasis is placed on personal responsibility for professional growth.

NURSING - TRANSITIONAL

NURSING - CONTINUING EDUCATION

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 Registered Nursing, BRN Provider No. 00294, and meet the requirements for relicensure.

RN 38 (½-3) THIS YEAR’S ISSUES IN HEALTH ½-3 Hrs. Lec. A variety of lectures, seminars, and 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 certain health related fields. Such topics as 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 ACUTEY 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 RN 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 intrave-
venous 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)

**NURSING - REGISTERED**

(Graduates of Hospital Diploma Schools of Nursing)

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

**Criteria**

1. Graduate of a state-accredited hospital school of nursing which had a curriculum covering the five basic areas of nursing (medicine, surgery, obstetrics, pediatrics, psychiatry).
2. Present California Registered Nurse License.
3. Present enrollment at Imperial Valley College.

**Program to be Completed**

Blanket credit for previous nursing courses completed ......... 40 Units
(Responds to number of RN course units in IVC Associate Degree Nursing Program.)

General Education courses to meet college requirements for graduation .......... 20 Units

(In order to allow the graduate to articulate with baccalaureate programs in nursing, it is strongly recommended that the following courses be taken within the general education requirements: Anatomy 8, Human Physiology 1, Biology 21, Psychology 1A, Sociology 1, Psychology 35.)

Applicants for this degree must verify items 1 and 2 of the Criteria with the Nursing Director. Check with Counseling Center for procedure to follow.

**NURSING - VOCATIONAL**

The Vocational Nurse Program (three semesters in length) prepares the student to receive a Certificate of Completion from the college and be eligible to write the examination given by the California Board of Vocational Nurse and Psychiatric Technician Examiners to obtain licensure as a Licensed Vocational Nurse. The program prepares men and women to give direct patient care in health-care agencies under the supervision of a registered nurse or physician. In addition to classes on the college campus, students receive coordinated instruction and clinical experiences at selected area hospitals under the guidance of nursing faculty members. Transportation to area hospitals and agencies must be supplied by the student.

Students are admitted every third semester (in September or January). A Nursing Admissions Committee will review all applications. Early application (six months before anticipated admission) is recommended, since the number of students who can be admitted is limited. Admission requirements include high school graduation (or its equivalent), a year of high school biology (or its college equivalent), eligibility to take the Eng 1A course and completion of Math 51 (as determined by college placement tests), physical and dental examinations (including specified immunizations). Applicants with prior education in nursing (RN, VN, or Health Aide) may apply for credit by examination and/or advanced placement. This will be determined on an individual basis. For continuation in and successful completion of the program, a grade of C or better is required in each of the courses below and an overall 2.0 grade point average (C=2.0) must be maintained in order to enroll in each succeeding semester of the program.

**CURRICULUM**

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*Second and third semesters may be reversed.

**VN 50 (7)**

**MEDICAL-SURGICAL NURSING I**

7 Hrs. Lab.

Prerequisite: Enrollment in the Vocational Nursing Program. Concurrent with VN 51. Introduction to the relationship that exists between the nurse and the patient and between the nurse and other members of the health team. Legal, ethical, spiritual, social and historical components of vocational nursing. Theories and principles of nursing care as they relate to patients with musculo-skeletal and digestive system disorders. Medications and nutrition integrated throughout.

**VN 51 (7)**

**CLINICAL FUNDAMENTALS**

21 Hrs. Lab.

Prerequisite: Concurrent with VN 50.

Application of the basic skills required to meet the immediate needs of the patient in the hospital setting. Foundations and principles of nursing care as they relate to patients with musculo-skeletal and digestive system disorders. Medications and nutrition integrated throughout.

**VN 52 (5)**

**MEDICAL-SURGICAL NURSING II**

5 Hrs. Lab.

Prerequisite: VN 50, VN 51. Concurrent with VN 54. Nursing care for patient with circulatory diseases. The interrelationship of the circulatory system with other systems of the body. The normal individual as well as the abnormal will be studied. Pharmacological and nutritional implications integrated throughout. Care opportunities, nursing organization and publications, legal and ethical aspects of the LVN, licensing requirements, personal responsibility for continuing education, legislation affecting health care.

**VN 53 (5)**

**MATERNAL-CHILD HEALTH NURSING**

5 Hrs. Lab.

Prerequisite: VN 50, VN 51. Concurrent with VN 54. Maternal and child health with emphasis on the normal growth and development pattern. Abnormal conditions introduced as they relate to prevention and control. The role and responsibilities of the vocational nurse to the family as a whole. Medications and nutrition integrated throughout.

**VN 54 (7)**

**CLINICAL FUNDAMENTALS**

21 Hrs. Lab.

Prerequisite: VN 50, VN 51. Concurrent with VN 52 and VN 53. Development of previously learned skills in addition to procedures of more complex nature related to total patient needs as well as specific diseases and disorders of the circulatory system. Nursing care of mother, the newborn infant and family group. Medications and nutrition integrated throughout.

**VN 55 (10)**

**MEDICAL-SURGICAL NURSING III**

10 Hrs. Lab.

Prerequisite: VN 50, VN 51. Concurrent with VN 56. A continuation in the understanding of theory related to nursing care of patients with health problems involving the excretory, integumentary, sensory, respiratory, endocrine and nervous systems. Care of the geriatric patient.
patient. The integration and interrelatedness of all body systems. Medications and nutrition integrated throughout.

VN 56 (7) CLINICAL FUNDAMENTALS 21 Hrs. Lab.
Prerequisite: VN 50, VN 51. Concurrent with VN 55. Continuation of development of proficiency in performing procedures and planning total patient care. Independent decision making within the realm of the vocational nurse. More intensive and comprehensive nursing techniques will be experienced. Previously learned nursing care will be emphasized and correlated. Stress will be placed on planning nursing care and making independent decisions. Medications and nutrition integrated throughout.

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.

PHIL 5 (3) INTRODUCTION TO PHOTOGRAPHY 2 Hrs. Lec. 3 Hrs. Lab.
The basic theory, techniques and skills of photography. Consideration will be given to factors such as correct use of cameras and lenses, determination of exposure, different types of films and filters, lighting, principles of composition, and the legal aspects of photography. Print production will be covered by sections on darkroom techniques, photographic chemicals, development of film, contact printing, and enlargement technique. The student will provide an adjustable camera for assignment work. Specific projects will be developed for students with special subject interest. (Same as Jrn 5)

PHIL 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.

PHIL 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 layout.

PHIL 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

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.

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.
COURSES OF INSTRUCTION

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 4ABCD (1-1-1-1)  
BADMINTON, COED  
2 Hrs. Lab.  
Etiquette, rules, background and techniques of playing badminton.

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 beginning 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)  
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 15ABCD (1-1-1-1)  
FIGURE CONTROL FOR WOMEN  
2 Hrs. Lab.  
This course is designed to emphasize physical conditioning and development. Equips the student with a knowledge of exercises and conditioning activities which can be used to maintain physical fitness throughout her adult life.

PE 16ABCD (2-2-2-2)  
JOG-ER-CISE  
1 Hr. Lec.  4 Hrs. Lab.  
Jog-er-cise will use various methods in order to combat obesity. Methods such as jogging, water exercises, weight lifting, exercises, guest speakers, buddy systems, counseling by instructor on an individual basis and rewards for accomplishment.

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 the game. Includes rules and etiquette of the game. Actual participation upon a golf course and the worthy use of leisure time is emphasized.

PE 19A (1)  
KARATE, COED  
2 Hrs. Lab.  
Designed to give the student an introduction to the basic movements of self-defense tactics used in Okinaw Kempo Karate.

PE 19B (1)  
KARATE, COED  
2 Hrs. Lab.  
Prerequisite: PE 19A or permission of instructor. Course is designed to give the student greater skill and expertise using techniques and self-defense tactics learned in PE 19A. Kumite (free sparring) will be a key element in further developing the skills learned in PE 19A.

PE 19C (1)  
ADVANCED KARATE  
2 Hrs. Lab.  
Prerequisite: PE 19A and PE 19B. This course is designed to give the intermediate student a chance to strengthen and perfect pin-ans and fighting techniques learned in PE 19B. Break techniques will also be included as part of the course.

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 22ABCD (1-1-1-1)  
RACQUETBALL AND HANDBALL, COED  
2 Hrs. Lab.  
Instruction and development of handball skills. Presentation of pin and doubles play, including basic strategy.

PE 23ABCD (1-1-1-1)  
BASKETBALL FOR WOMEN  
2 Hrs. Lab.  
Designed for women students interested in participating in a recreational program.
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 fundamental skills and strategy of the game. Rules and class competition are included in the course.

**PE 25ABCD (1-1-1-1)**
**FOLK DANCE, COED**
2 Hrs. Lab.
Participation and instruction in basic fundamentals, forms and patterns of folk dancing.

**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 27ABCD (1-1-1-1)**
**DISCO DANCE, COED**
2 Hrs. Lab.
To enhance the dancing skills and present day “disco” patterns.

**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 Associated Students’ Handbook for Athletics will also apply. Team membership will be the top seeded 8-10 players. Open to both men and women.

**PE 39ABCD (2-2-2-2)**
**COLLEGE RODEO**
10 Hrs. Lab.
(Same as Ag 69ABCD)

**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 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. 4 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 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 57 (2)**
**BOATING SAFETY**
1 Hr, Lec. 2 Hrs, Lab.
Prerequisite: swimming ability. However, all students will be required to wear personal floating devices while on open water. The course will stress boating safety in relation to the purchase and operation of equipment required on boats used on coastal and inland waters of California. Material will be presented in classes on laws, regulations, operation, maintenance, navigation, rescue, first aid, equipment, weather, accident prevention, rules-of-the-road, anchoring and sailor terminology. There will be swimming pool and open lake boating operation opportunities during the lab.

**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.

**PE 64AB (1-1)**
**HORSEMANSHIP-EQUITATION**
1 Hr, Lec. 1 Hr, Lab.
(Same as Ag 64AB)

**PE 66 (1)**
**INTERMEDIATE HORSEMANSHIP-EQUITATION**
1 Hr, Lec. 1 Hr, Lab.  
(Same as Ag 66)

**PL 1 (3)**
**UNDERSTANDING EXCEPTIONAL STUDENTS**
2 Hrs, Lec. 2 Hrs, Lab. 
(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 hand capped 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 adaptive participation in community college activities, academic, vocational and environmental.

**PL 4AB (3-2)**
**LIVING WITH A HEARING LOSS**
2 Hrs, Lec.
A course designed to help reduce 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 specifically for the mature person who has an acquired hearing loss.

**PL 6ABCD EFGH (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. Course will include definitions of hearing loss, history of deaf education, problems of communication, as we emphasize vocabulary development, syntax and idiomatic expressions by the "typical" deaf adult.

**PL 11 (4)**
**INTERMEDIATE COMMUNICATION WITH THE DEAF**
5 Hrs, Lec.
Prerequisite: Completion of PL Vocabulary enrichment and fingerspelling drill designed to increase sp accuracy and rhythm in expressive language and improved receptive
ty. 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. Lab.  
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 22ABCD (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 23ABCD (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 media and methods.

**PL 24ABCD (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 25ABCD (1-1-1-1)**  
**COMMUNICATION WITH THE DEAF IN THE COMMUNITY**  
1 Hr. Lab.  
Prerequisites: PL 10, PL 11, PL 12 or permission of the instructor. This course is designed for deaf students at public schools and community centers.

**PL 26ABCD (1-1-1-1)**  
**COMMUNICATION WITH THE DEAF IN THE INDUSTRIAL WORKPLACE**  
1 Hr. Lab.  
Prerequisites: PL 10, PL 11, PL 12 or permission of the instructor. This course is designed for deaf students in the workplace.

**PL 27ABCD (1-1-1-1)**  
**COMMUNICATION WITH THE DEAF IN THE COMMUNITY AND INDUSTRIAL WORKPLACE**  
1 Hr. Lab.  
Prerequisites: PL 10, PL 11, PL 12 or permission of the instructor. This course is designed for deaf students in the community and workplace.

**PL 28ABCD (1-1-1-1)**  
**COMMUNICATION WITH THE DEAF IN THE COMMUNITY AND INDUSTRIAL WORKPLACE**  
1 Hr. Lab.  
Prerequisites: PL 10, PL 11, PL 12 or permission of the instructor. This course is designed for deaf students in the community and workplace.

**PL 29ABCD (1-1-1-1)**  
**COMMUNICATION WITH THE DEAF IN THE COMMUNITY AND INDUSTRIAL WORKPLACE**  
1 Hr. Lab.  
Prerequisites: PL 10, PL 11, PL 12 or permission of the instructor. This course is designed for deaf students in the community and workplace.

**PL 30 (3)**  
**INTRODUCTION TO SPEECH AND LANGUAGE**  
3 Hrs. Lec.  
This course is designed to acquaint the student with the normal speech and language developmental sequence, and introduce him 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 student to principles of behavior modification as used in speech and hearing pathology, to enable him 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 audiology, basic anatomy and physiology of the hearing mechanism, pathologies causing impaired hearing, interrelationship of hearing to speech and language development, and familiarization with audiology 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 audiometrician, nurse-audiometrician 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. 2 Hrs. Lab.  
(Same as Ag 50, AT 50, Math 50 and Weld 50)

### PHYSICAL SCIENCE

**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.

### PHYSICS

**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.
Prerequisite: Phys 4B and completion of 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: Chemistry and Biology or Anatomy at either high school or 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 17B 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 17A 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 adjustment 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. A 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 and approaches to personality growth are discussed. (Same as TA:)

**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 problem of everyday living. An experiential approach, including emphasis upon effective behavioral alternatives in parent-child, interpersonal, and social 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 for learning aid for students taking Psychology 1A. The class will review general concepts from Psychology 1A, and offer 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)
<table>
<thead>
<tr>
<th>COURSES OF INSTRUCTION</th>
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<tbody>
<tr>
<td>PSYCH 11AB (3-3)</td>
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<tr>
<td>PRACTICUM</td>
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<tr>
<td>1 Hr. Lec. 6 Hrs. Lab.</td>
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<tr>
<td>field experience</td>
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<td>per week</td>
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<td>(Same as HR 11AB)</td>
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<tr>
<td>PSYCH 12 (3)</td>
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<tr>
<td>ELEMENTARY STATISTICS</td>
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<tr>
<td>3 Hrs. Lec.</td>
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<tr>
<td>Prerequisite: Math A or equivalent. (Same as Bus 26/Math 12)</td>
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<tr>
<td>PSYCH 13AB (3-3)</td>
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<tr>
<td>THE PARAPROFESSIONAL IN</td>
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<tr>
<td>COUNSELING</td>
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<tr>
<td>2 Hrs. Lec. 3 Hrs. Lab.</td>
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<tr>
<td>A course designed for student paraprofessionals to increase their self-awareness, assertiveness, communication skills, and helping skills. Topics covered include an overview of theories and research on human development and behavior; characteristics of the &quot;healthy&quot; personality; issues faced by college students; types of change agents; techniques for facilitating change; group dynamics; and the role of the student. Two hours lecture, three hours spent weekly in supervised off-campus experiential placements such as in peer counseling, tutoring, etc. (Same as HR 13AB)</td>
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<tr>
<td>PSYCH 14 (3)</td>
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<tr>
<td>ABNORMAL PSYCHOLOGY</td>
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<td>3 Hrs. Lec.</td>
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<tr>
<td>Prerequisites: Psych 1A. Recommended: Psych 2 and Psych 3. This course reviews the causes and problems of disordered behavior. Current practices in therapy and prevention are emphasized. The topics of anxiety and fear, psychoneuroses, organic and functional psychoses are included.</td>
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<tr>
<td>PSYCH 15 (3)</td>
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<tr>
<td>SOCIAL AND PSYCHOLOGICAL</td>
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<tr>
<td>DYNAMICS OF DRUG USE</td>
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<td>3 Hrs. Lec.</td>
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<tr>
<td>Prerequisite: Completion of, or concurrent enrollment in, Psych 1A, Psych 1B, 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: societal influences, subcultural influence, primary group influences (peer group, and 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)</td>
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<tr>
<td>PSYCH 16 (3)</td>
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<tr>
<td>THE PSYCHOLOGY OF</td>
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<tr>
<td>INTERPERSONAL RELATIONSHIPS</td>
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<tr>
<td>3 Hrs. Lec.</td>
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<td>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.</td>
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<tr>
<td>PSYCH 17 (3)</td>
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<tr>
<td>SOCIAL PSYCHOLOGY</td>
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<td>3 Hrs. Lec.</td>
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<tr>
<td>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)</td>
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<td>PSYCH 18 (3)</td>
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<td>PSYCHOPHARMACOLOGY</td>
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<td>3 Hrs. Lec.</td>
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<tr>
<td>A study of the pharmacology of drugs, with emphasis on the effects of drugs on the body and the mind. Topics include the classification of drugs, their actions on the nervous system, and their effects on behavior. (Same as ECE 27)</td>
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<tr>
<td>PSYCH 19 (3)</td>
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<tr>
<td>PSYCHOSOCIAL DEVELOPMENT</td>
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<tr>
<td>OF CHILDREN</td>
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<td>3 Hrs. Lec.</td>
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<tr>
<td>A study of the psychological development of children, aimed at immediate and practical application of child rearing theory and practice, designed for prospective parents, children, 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 ECE 20)</td>
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<tr>
<td>PSYCH 20 (3)</td>
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<tr>
<td>DEVELOPMENTAL PSYCHOLOGY</td>
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<tr>
<td>OF CHILDREN</td>
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<td>3 Hrs. Lec.</td>
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<td>A study of the psychological development of children, aimed at immediate and practical application of child rearing theory and practice, designed for prospective parents, children, 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 ECE 20)</td>
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<tr>
<td>PSYCH 21 (3)</td>
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<tr>
<td>EARLY CHILDHOOD</td>
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<td>SOCIALIZATION: CHILDREN,</td>
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<tr>
<td>FAMILY AND COMMUNITY</td>
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<tr>
<td>3 Hrs. Lec.</td>
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<tr>
<td>(Same as ECE 21)</td>
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<tr>
<td>PSYCH 22 (3)</td>
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<tr>
<td>PRINCIPLES OF CHILD</td>
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<tr>
<td>DEVELOPMENT &amp; OBSERVATION</td>
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<tr>
<td>3 Hrs. Lec.</td>
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<tr>
<td>(Same as ECE 22)</td>
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<tr>
<td>PSYCH 23 (3)</td>
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<tr>
<td>EARLY CHILDHOOD</td>
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<tr>
<td>DEVELOPMENTAL CURRICULUM</td>
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<tr>
<td>3 Hrs. Lec.</td>
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<tr>
<td>(Same as ECE 23)</td>
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<tr>
<td>PSYCH 24 (3)</td>
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<tr>
<td>CREATIVE LEARNING</td>
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<tr>
<td>EXPERIENCES FOR YOUNG</td>
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<td>CHILDREN</td>
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<tr>
<td>3 Hrs. Lec.</td>
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<td>(Same as ECE 24, TA 24)</td>
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<tr>
<td>PSYCH 25 (3)</td>
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<tr>
<td>FIELD EXPERIENCE</td>
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<tr>
<td>1 Hr. Lec. 10 Hrs. Field Experience</td>
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<tr>
<td>(Same as ECE 25)</td>
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<td>PSYCH 26 (3)</td>
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<td>THE ART OF PARENTING</td>
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<td>3 Hrs. Lec.</td>
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<td>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 ECE 26)</td>
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<tr>
<td>PSYCH 27 (3)</td>
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<tr>
<td>UNDERSTANDING EXCEPTIONAL</td>
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<td>STUDENTS</td>
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<td>2 Hrs. Lec. 2 Hrs. Lab.</td>
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<tr>
<td>Prerequisites: 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/PL 1)</td>
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<tr>
<td>PSYCH 28 (3)</td>
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<tr>
<td>ADMINISTRATION AND</td>
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<tr>
<td>SUPERVISION IN</td>
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<tr>
<td>EARLY CHILDHOOD</td>
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<tr>
<td>EDUCATION</td>
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<tr>
<td>3 Hrs. Lec.</td>
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<tr>
<td>(Same as ECE 28)</td>
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<tr>
<td>PSYCH 29 (2)</td>
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<tr>
<td>CHILD DEVELOPMENT ASSOCIATES</td>
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<tr>
<td>INTRODUCTION AND INITIAL</td>
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<tr>
<td>ASSESSMENT</td>
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<tr>
<td>1 Hr. Lec. 2 Hrs. Lab.</td>
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<tr>
<td>(Same as ECE 29)</td>
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<tr>
<td>PSYCH 30 (3)</td>
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<tr>
<td>PSYCHOLOGY OF ADOLESCENCE</td>
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<td>3 Hrs. Lec.</td>
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<tr>
<td>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.</td>
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<tr>
<td>PSYCH 31 (2)</td>
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<tr>
<td>CHILD DEVELOPMENT ASSOCIATES</td>
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<tr>
<td>PORTFOLIO</td>
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<tr>
<td>2 Hrs. Lec.</td>
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<td>(Same as ECE 31)</td>
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PSYCH 35 (3)
DEVELOPMENTAL PSYCHOLOGY: CONCEPTION TO DEATH
3 Hrs. Lec.
Prerequisites: None (Psych 1A recommended). A study of the psychological 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 both a social and psychological nature.

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 41 (3)
BEING SINGLE IN A COUPLED SOCIETY
3 Hrs. Lec.
Course participants will examine various issues related to the changing status of single people in contemporary America. Participants will consider the economic, social, and personal differences between being single and being coupled, and will have an opportunity to clarify their own attitudes and choices regarding single vs. coupled.

PSYCH 42 (2)
ADJUSTMENT TO THE DISSOLUTION OF MARRIAGE
2 Hrs. Lec.
This course will provide an historical overview of the social, moral, economic, religious, and family changes which have led to an increase in the number of marriages that fail. Attention will be given to the dynamics of a marital breakdown and to the legal process involved. Ambivalence, fear, guilt, depression, loneliness, and other responses will be examined. Social adjustments, including single parenthood, handling peer pressure, dating, re-marriage, and dealing with the ex-spouse will be analyzed. Small group interaction will be used to demonstrate important dynamics. While this course has been designed with the scope and depth of information required by counselors, its organization makes it suitable for those actually involved in the dissolution process. (Same as Soc 42)

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)

PSYCH 47 (1)
ASSERTIVE TECHNIQUES THEORY AND PRACTICE
1 Hr. Lec.
The class will study assertiveness as the learned ability to express one's feelings and preferences without infringing on the rights of others. The class will be a training/learning experience in constructive communication skills to increase assertive behavior and to work effectively with aggressive individuals. The student will have an opportunity to acquire skills in a non-threatening environment. Practice and observation will supplement specific techniques and theories.

PSYCH 48 (1)
ASSERTIVE TECHNIQUES APPLIED
1 Hr. Lec.
This course will emphasize the application of specific assertive techniques and the development of generalized assertiveness as an approach to dealing with others. In-class simulations will provide students practice in applying new communication skills as well as the opportunity to "rehearse" actual situations from their everyday life.

RECREATION

REC 70 (3)
INTRODUCTION TO LEISURE
3 Hrs. Lec.
Introduces the basic ideas and problems in leisure and recreation in our contemporary society and projects this thinking into the future. Content will vary with the semester and will be course planned by the instructor.

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 social recreation activities.

SOCIAL SCIENCE

SOC SCI 52 (3)
INTRODUCTION TO AMERICAN GOVERNMENT
3 Hrs. Lec.
Introduces students to the American political system, stressing the role of government in American life. An introduction to the foundations of the American Constitution and political system. An introduction to the American political system, emphasizing the role of government in American life. The course will meet the graduation requirement in American Institutions.

SOC SCI 69 (3)
PERSONAL Finance
3 Hrs. Lec.
(As same as Bus 11)
### 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)

### SOCIOL 42 (2)
**ADJUSTMENT TO THE DISSOLUTION OF MARRIAGE**
2 Hrs. Lec.
(Same as Psych 42)

### SPANISH

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 for graduation credit, not to exceed four 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 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.

#### 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 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, preterite, 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 of 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 2B.

#### 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 of 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 transfer 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 12 (2)
ADVANCED CONVERSATIONAL SPANISH
2 Hrs. Lec. 1 Hr. Lab.
Prerequisites: Span 11 or consent of instructor. Continuation of Span 11. Conversational skills developed through selected topics from text, newspapers, magazines, interviews and skits. Not open to students with native ability in the language.

SPAN 17 (3)
MEXICAN POPULAR FOLK ARTS
3 Hrs. Lec.
(Same as Hum 17)

SPAN 18 (3)
INTERMEDIATE SHORTHAND FOR BILINGUALS
2 Hrs. Lec. 3 Hrs. Lab.
(Same as Bus 36)

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 pronunciation. This course will include 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. Introductory survey of representative movements, authors and works of Spanish literature from the Middle Ages to the present. Concurrent enrollment in Spn 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 Spani-
American literature from the Spanish Discovery to the present. Concurrent enrollment in Span 41 is recommended. Course conducted in Spanish.

**SPAN 28A (3)**
**THE MEXICAN AMERICAN IN LITERATURE**
3 Hrs. Lab.  
(Same as Eng 30A)

**SPAN 28B (3)**
**THE MEXICAN AMERICAN IN LITERATURE**
3 Hrs. Lab.  
(Same as Eng 30B)

**SPAN 40 (3)**
**CIVILIZATION OF SPAIN AND PORTUGAL**
3 Hrs. Lab.  
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. Lab.  
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. Lab.  
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. Lab.  
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 52 (2)**
**BEGINNING CONVERSATIONAL SPANISH AND GUITAR**
2 Hrs. Lec. 1 Hr. Lab.  
Basic conversational Spanish for students with little or no previous instruction in the language. Presentation of elementary structures and vocabulary. Designed for communication on everyday matters. A portion of the instructional period will be devoted to acquaint the student with a basic accompaniment on the guitar of popular Mexican folk songs.

**SPAN 53 (2)**
**BEGINNING GUITAR AND MEXICAN FOLK SONGS FOR SPANISH SPEAKERS**
2 Hrs. Lec. 1 Hr. Lab.  
Study of basic guitar chords used in traditional Mexican folk songs with a brief introduction to the history and background of the origins of each selection. Study of contemporary songs by modern composers and their growing popularity among all classes in Mexico. Practice and drill in playing the guitar and singing.

**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)

**SPAN 80 (1)**
**ORIENTATION FOR TRAVEL IN MEXICO**
2 Hrs. Lec.  
Course designed specifically for persons planning a trip to Mexico. The course will touch on all of the aspects of Mexican life — history, geography, language, culture — in order to enhance and make a trip to Mexico more enriching. Included will be intensive drill on phrases essential to the traveler in Mexico as well as information on prices, visa requirements, recommended hotels, methods of travel, places of interest, and shopping trips. The course will consist of lectures, discussions, filmstrip presentations, and field trips.

**SPAN 81 (1)**
**TRAVEL IN MEXICO**
1 Hr. Lec.  
Prerequisites: Span 80. Field excursion to areas in Mexico to practice the Spanish language and to acquaint the student with Mexican culture and everyday life in an authentic setting. An introduction to travel, accommodations and tourist sites available to tourists in Mexico.

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**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 unit credit to be determined by the Division and the Office of Instruction in relation to community-student interest and available staff. Not offered every semester. Courses numbered 81-88 are non-transferable.
**COURSES OF INSTRUCTION**

**SPEECH**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit Hours</th>
<th>Description</th>
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<tbody>
<tr>
<td>SP 1 (3)</td>
<td>ORAL COMMUNICATION</td>
<td>3 Hrs. Lec.</td>
<td>Training in the fundamental processes involved in oral communication with emphasis on organizing material, outlining, constructing, and delivering various forms of speeches.</td>
</tr>
<tr>
<td>SP 2 (3)</td>
<td>INTERMEDIATE PUBLIC SPEAKING</td>
<td>3 Hrs. Lec.</td>
<td>Prerequisite: Sp 1. A continuation of Sp 1 with particular emphasis on organization and delivery, and study in the areas of parliametary procedure, debate, discussion, and oral reading.</td>
</tr>
<tr>
<td>SP 10 (3)</td>
<td>ARGUMENTATION AND DEBATE</td>
<td>3 Hrs. Lec.</td>
<td>Prerequisite: Sp 1, taken previously or concurrently. An introduction to the problems of evidence and inference, with emphasis on the application of logic to rational discussion of social problems.</td>
</tr>
<tr>
<td>SP 11 (3)</td>
<td>ORAL INTERPRETATION — READERS THEATRE</td>
<td>3 Hrs. Lec.</td>
<td>Discovering and imparting, vocally, intelligent and emotional meanings of the printed page.</td>
</tr>
<tr>
<td>SP 12ABCD</td>
<td>FORENSICS</td>
<td>(1-1-1-1)</td>
<td>1 Hr. Lec.</td>
</tr>
<tr>
<td>SP 30 (3)</td>
<td>VOICE AND ARTICULATION DEVELOPMENT</td>
<td>3 Hrs. Lec.</td>
<td>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.</td>
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**TEACHER AIDE**

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<th>Course Code</th>
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<tbody>
<tr>
<td>TA 1 (3)</td>
<td>INTRODUCTION TO INSTRUCTIONAL ASSOCIATE</td>
<td>3 Hrs. Lec.</td>
<td>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.</td>
</tr>
<tr>
<td>TA 3 (3)</td>
<td>PSYCHOLOGY OF PERSONAL AND SOCIAL ADJUSTMENT</td>
<td>3 Hrs. Lec.</td>
<td>(Same as Psych 3)</td>
</tr>
<tr>
<td>TA 4 (3)</td>
<td>BILINGUAL-MULTICULTURAL CURRICULUM AND INSTRUCTION</td>
<td>3 Hrs. Lec.</td>
<td>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)</td>
</tr>
<tr>
<td>TA 6 (3)</td>
<td>LANGUAGE DEVELOPMENT FOR YOUNG CHILDREN</td>
<td>3 Hrs. Lec.</td>
<td>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)</td>
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</table>

**MATHEMATICS FOR YOUNG CHILDREN**

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<tbody>
<tr>
<td>TA 8 (3)</td>
<td>MATHEMATICS FOR YOUNG CHILDREN</td>
<td>3 Hrs. Lec.</td>
<td>Prerequisite: TA 1. An understanding of how mathematics and number concepts develop in children. An experimental approach to mathematics through math games and Montessori materials and math games. 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)</td>
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</table>

**FIELD EXPERIENCE**

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<tbody>
<tr>
<td>TA 9 (3)</td>
<td>FIELD EXPERIENCE</td>
<td>1 Hr. Lec. 10 Hrs. Lab.</td>
<td>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.</td>
</tr>
<tr>
<td>TA 24 (3)</td>
<td>CREATIVE LEARNING EXPERIENCE FOR YOUNG CHILDREN</td>
<td>3 Hrs. Lec.</td>
<td>(Same as ECE 24, Psych 24)</td>
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**WATER TREATMENT TECHNOLOGIES**

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>WT 1 (4)</td>
<td>WATER TREATMENT PLANT OPERATOR</td>
<td>3 Hrs. Lec. 3 Hrs. Lab.</td>
<td>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, operation, interpretation of laboratory results, and possible approaches to solving operational problems.</td>
</tr>
<tr>
<td>WT 2 (3)</td>
<td>WATER TREATMENT PLANT OPERATOR II</td>
<td>3 Hrs. Lec. 3 Hrs. Lab.</td>
<td>Prerequisite: WT 1. Study of fresh-water maintenance, safety, sampling, laboratory procedures, hydraulics, equipment analysis, and presentation.</td>
</tr>
<tr>
<td>WT 3 (3)</td>
<td>WASTE WASTE TREATMENT PLANT OPERATOR</td>
<td>3 Hrs. Lec. 3 Hrs. Lab.</td>
<td>Prerequisite: Math 51 or satisfactory score on math placement test. This course will provide information needed to operate a waste-water treatment plant as efficiently as possible. Course will consist of start-up operation, operation, interpretation of laboratory results, and possible approaches to solving operational problems.</td>
</tr>
</tbody>
</table>
COURSES OF INSTRUCTION

WT 4 (4)
WASTE WATER TREATMENT II
3 Hrs. Lec. 3 Hrs. Lab.
Prerequisite: WT 3. Study of waste-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: Waterborne 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 7 (3)
COMPUTATIONAL PROCEDURES FOR TREATMENT PLANT OPERATOR II
3 Hrs. Lec.
Prerequisite: WT 6. 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: mathematics pertaining to wastewater collection; preliminary treatment; primary treatment; secondary treatment; trickling filters; secondary clarifiers, and activated sludge.

WT 8 (3)
COMPUTATIONAL PROCEDURES FOR TREATMENT PLANT OPERATOR III
3 Hrs. Lec.
Prerequisite: WT 7. 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: sludge treatment and disposal; sludge pumping; digester seeding; digester loading; volatile acids/alkalinity ratio; effluent treatment and disposal; chlorination; sand filtration; disposal by dilution and laboratory calculations.

WELDING TECHNOLOGY

WELD 30 (3)
ARC WELDING
2 Hrs. Lec. 3 Hrs. Lab.

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 (3)
ADVANCED WELDING
2 Hrs. Lec. 3 Hrs. Lab.
Prerequisites: Weld 30 and Weld 32 or approval of the instructor. A concentrated course in Shielded Metal Arc Welding (SMAW) where the student develops his welding skill to a professional entry level on flat plate in all positions. Includes a review of Oxy-Acetylene cutting.

WELD 36B (3)
ADVANCED WELDING
2 Hrs. Lec. 3 Hrs. Lab.
Prerequisites: Weld 36A or by permission of instructor. Emphasis is on the testing of metals, the atomic structure of metals, the effects of heat on metals, and the effects of welding on metals.

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 sheet metal into useful products.

WELD 50 (3)
SHOP MATHEMATICS
3 Hrs. Lec. 2 Hrs. Lab.
(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)

COOPERATIVE WORK EXPERIENCE

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 employees 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.
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.

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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**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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 14</td>
<td>Entomology</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 25</td>
<td>Agricultural Bus. Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 27</td>
<td>Agricultural Sales and Service Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 40</td>
<td>Soils</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 41</td>
<td>Fertilizers</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 49</td>
<td>Weeds and Weed Control</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. **Acceptable courses for the major (6 units from the following courses)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 26</td>
<td>Agricultural Business Organization and Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 45</td>
<td>Vegetable Production</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 4</td>
<td>Principles of Marketing</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 5A</td>
<td>Business Law</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 10A</td>
<td>Practical Bookkeeping</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>(3)</td>
</tr>
<tr>
<td>WE Occ 80</td>
<td>Personal Efficiency</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 81</td>
<td>Motivation</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 82</td>
<td>Labor and the Economy</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 83</td>
<td>Laws Affecting Employees</td>
<td>(4)</td>
</tr>
</tbody>
</table>

### AGRICULTURAL CHEMICAL TECHNOLOGY

Twenty-two units required for the major

I. **Required courses for the major**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 14</td>
<td>Entomology</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 28</td>
<td>Heavy Equipment Operation and Maintenance</td>
<td>(5)</td>
</tr>
<tr>
<td>Ag 40</td>
<td>Soils</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 41</td>
<td>Fertilizers</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 49</td>
<td>Weeds and Weed Control</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. **Acceptable courses for the major (5 units from the following courses)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 30</td>
<td>Agricultural Mechanics</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 32</td>
<td>Irrigation and Drainage</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 33A</td>
<td>Farm Power</td>
<td>(5)</td>
</tr>
<tr>
<td>Ag 37</td>
<td>Small Gasoline Engines</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 45</td>
<td>Vegetable Production</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 65</td>
<td>Control of Insects &amp; Other Pests</td>
<td>(3)</td>
</tr>
<tr>
<td>Bot 1A</td>
<td>General Botany</td>
<td>(4)</td>
</tr>
<tr>
<td>Chem 2A</td>
<td>Introduction to Chemistry</td>
<td>(4)</td>
</tr>
<tr>
<td>Eng 7</td>
<td>Technical and Report Writing</td>
<td>(3)</td>
</tr>
<tr>
<td>WE Occ 80</td>
<td>Personal Efficiency</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 81</td>
<td>Motivation</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 82</td>
<td>Labor and the Economy</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 83</td>
<td>Laws Affecting Employees</td>
<td>(4)</td>
</tr>
<tr>
<td>Weld 30</td>
<td>Arc Welding</td>
<td>(3)</td>
</tr>
<tr>
<td>Weld 32</td>
<td>Oxy-Acetylene Welding</td>
<td>(3)</td>
</tr>
</tbody>
</table>

### AGRICULTURAL MACHINERY

Twenty-two units required for the major

I. **Required courses for the major**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 28</td>
<td>Heavy Equipment Operation and Maintenance</td>
<td>(5)</td>
</tr>
<tr>
<td>Ag 30</td>
<td>Agricultural Mechanics</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 33A</td>
<td>Farm Power</td>
<td>(5)</td>
</tr>
<tr>
<td>Weld 30</td>
<td>Arc Welding</td>
<td>(3)</td>
</tr>
<tr>
<td>Weld 32</td>
<td>Oxy-Acetylene Welding</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. **Acceptable courses for the major (3 units from the following courses)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 33B</td>
<td>Farm Power</td>
<td>(5)</td>
</tr>
<tr>
<td>Ag 35</td>
<td>Fluid Power</td>
<td>(4)</td>
</tr>
<tr>
<td>Ag 36</td>
<td>Agricultural Construction</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 37</td>
<td>Small Gasoline Engines</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 38</td>
<td>Electricity on the Farm</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 50</td>
<td>Shop Mathematics</td>
<td>(3)</td>
</tr>
<tr>
<td>WE Occ 80</td>
<td>Personal Efficiency</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 81</td>
<td>Motivation</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 82</td>
<td>Labor and the Economy</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 83</td>
<td>Laws Affecting Employees</td>
<td>(4)</td>
</tr>
</tbody>
</table>

### ANIMAL SCIENCE

Twenty-two units required for the major

I. **Required courses for the major**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 20</td>
<td>Animal Science</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 21</td>
<td>Feeds and Feeding</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 22</td>
<td>Livestock Selection</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 23</td>
<td>Animal Diseases</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 24</td>
<td>Horse Husbandry</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. **Acceptable courses for the major (7 units from the following courses)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 14</td>
<td>Entomology</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 28</td>
<td>Heavy Equipment Operation and Maintenance</td>
<td>(5)</td>
</tr>
<tr>
<td>Ag 30</td>
<td>Agricultural Mechanics</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 33A</td>
<td>Farm Power</td>
<td>(5)</td>
</tr>
<tr>
<td>Ag 42</td>
<td>Plant Science &amp; Forage Crops</td>
<td>(4)</td>
</tr>
<tr>
<td>Ag 64</td>
<td>Horsemanship-Equitation</td>
<td>(1)</td>
</tr>
<tr>
<td>Ag 66</td>
<td>Intermediate Horsemanship-Equitation</td>
<td>(1)</td>
</tr>
<tr>
<td>Chem 2A</td>
<td>Introduction to Chemistry</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 80</td>
<td>Personal Efficiency</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 81</td>
<td>Motivation</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 82</td>
<td>Labor and the Economy</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 83</td>
<td>Laws Affecting Employees</td>
<td>(4)</td>
</tr>
<tr>
<td>Weld 30</td>
<td>Arc Welding</td>
<td>(3)</td>
</tr>
<tr>
<td>Weld 32</td>
<td>Oxy-Acetylene Welding</td>
<td>(3)</td>
</tr>
</tbody>
</table>
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 OR California Indians (3)
- Anthro 11 Indians of Southern California (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)
- Anthro 9 Mexican American Cultural Traditions (3)
- Anthro 10 Ethnobotany of Imperial County (1)
- Anthro 11 Indians of Southern California (3)
- Anthro 12 Ethnography of the Yuman Indians (2)

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)

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 Gasoline and Diesel Engines (5)
- Auto Tech 56 Electrical, Starting, Charging, Ignition and Related Electrical Systems (3)

II. Acceptable courses for the major

- 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 (3)
- Weld 30 Arc Welding (3)
- Weld 32 Oxy-Acetylene Welding (3)

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 30 Arc Welding (3)
- Weld 32 Oxy-Acetylene Welding (3)

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 (3)
- Auto Tech 54 Electrical and Fuel Systems (3)
- Auto Tech 58 Automotive Air-Conditioning (3)
- WE Cooperative Work Experience (4)
- Weld 34 Inert Gas Shielded Arc Welding (3)

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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 5A</td>
<td>Business Law</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 42</td>
<td>Business Correspondence</td>
<td>(3)</td>
</tr>
<tr>
<td>Econ 1</td>
<td>Principles of Economics</td>
<td>(3)</td>
</tr>
<tr>
<td>Sp 1</td>
<td>Oral Communications</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**BANKING—CREDIT ADMINISTRATION**

Twenty-three units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 1A</td>
<td>Principles of Accounting</td>
<td>(4)</td>
</tr>
<tr>
<td>Bus 1B</td>
<td>Principles of Accounting</td>
<td>(4)</td>
</tr>
<tr>
<td>Bus 60</td>
<td>Principles of Bank Operations</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 61</td>
<td>Analysis of Financial Statements</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 62</td>
<td>Installment Credit</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major (select a minimum of 6 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 5A</td>
<td>Business Law</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 7</td>
<td>Human Relations in Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 42</td>
<td>Business Correspondence</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 63</td>
<td>Financing Business Enterprises</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 64</td>
<td>Agricultural Finance</td>
<td>(3)</td>
</tr>
<tr>
<td>Econ 1A</td>
<td>Principles of Economics</td>
<td>(3)</td>
</tr>
<tr>
<td>Sp 1</td>
<td>Oral Communication</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**BANKING—SECRETARIAL**

Twenty-two to 28 units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 5A</td>
<td>Business Law</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 21AB</td>
<td>Proficiency-Exit Typing*</td>
<td>(2-2)</td>
</tr>
<tr>
<td>Bus 32AB</td>
<td>Dictation &amp; Transcription Lab**</td>
<td>(3-3)</td>
</tr>
<tr>
<td>Bus 40 OR</td>
<td>Grammar and Usage</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 41 OR</td>
<td>Essentials of Business Correspondence</td>
<td>(2 or 3)</td>
</tr>
<tr>
<td>Bus 42</td>
<td>Business Correspondence</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 60</td>
<td>Principles of Bank Operations</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major (6 units from the following courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sp 1</td>
<td>Oral Communication</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 7</td>
<td>Human Relations in Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 39</td>
<td>Office Procedures</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 50</td>
<td>Introduction to Data Processing</td>
<td>(3)</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 5A</td>
<td>Business Law</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 10A</td>
<td>Practical Bookkeeping**</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 21AB</td>
<td>Proficiency-Exit Typing*</td>
<td>(2-2)</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 40</td>
<td>Grammar and Usage</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 60</td>
<td>Principles of Bank Operations</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. Recommended as electives (do not fulfill major requirements)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio 3</td>
<td>Principles of Biological Science</td>
<td>(4)</td>
</tr>
<tr>
<td>Jrn 3</td>
<td>Mass Communication</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 11AB/HR 11AB</td>
<td>Practicum</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 15</td>
<td>Social and Psychological Dynamics</td>
<td>(3)</td>
</tr>
<tr>
<td>Sociol 15</td>
<td>of Drug Use</td>
<td>(3)</td>
</tr>
</tbody>
</table>

---

**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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro 1</td>
<td>Physical Anthropology</td>
<td>(3)</td>
</tr>
<tr>
<td>Anthro 2</td>
<td>Cultural Anthropology</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**Psychology**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psych 1A</td>
<td>General Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 1B</td>
<td>Advanced General Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 2</td>
<td>Intro. to Physiological Psych.</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych3/TA 3</td>
<td>Psychology of Personal and Social Adjustment</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 9/HR 9</td>
<td>Interviewing and Counseling</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 11AB/HR 11AB</td>
<td>Practicum</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 12/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus 26/Math 12</td>
<td>Elementary Statistics</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 14</td>
<td>Abnormal Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 16</td>
<td>The Psychology of Interpersonal Relationships</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 17/Sociol 17</td>
<td>Social Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 20/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECE 20</td>
<td>Develop. Psych. of Children</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 22/</td>
<td>Principles of Child Development</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 22</td>
<td>and Observation</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 27/</td>
<td>Understanding Exceptional Students</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 27/PL 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psych 30</td>
<td>Psychology of Adolescence</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 35</td>
<td>Developmental Psychology: Conception to Death</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**Sociology**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociol 1</td>
<td>Principles of Sociology</td>
<td>(3)</td>
</tr>
<tr>
<td>Sociol 2</td>
<td>Contemporary Social Problems</td>
<td>(3)</td>
</tr>
<tr>
<td>Sociol 17/Sociol 17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psych 17</td>
<td>Social Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Sociol 33</td>
<td>Marriage and the Family</td>
<td>(3)</td>
</tr>
</tbody>
</table>

---

77
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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng 2</td>
<td>Introduction to Linguistics</td>
</tr>
<tr>
<td>Eng 30A</td>
<td>The Mexican American in Literature</td>
</tr>
<tr>
<td>Hist 30</td>
<td>Mexico &amp; the American Southwest</td>
</tr>
<tr>
<td>Span 2</td>
<td>Elementary Spanish</td>
</tr>
<tr>
<td>Span 3</td>
<td>Intermediate Spanish</td>
</tr>
<tr>
<td>Span 4</td>
<td>Intermediate Spanish</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 10A</td>
<td>Practical Bookkeeping</td>
</tr>
<tr>
<td>Bus 10B</td>
<td>Practical Bookkeeping</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
</tr>
<tr>
<td>Bus 24</td>
<td>Records Management</td>
</tr>
<tr>
<td>Bus 25</td>
<td>Financial Record Typing</td>
</tr>
<tr>
<td>Bus 50</td>
<td>Introduction to Data Processing</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major (select a minimum of 3 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 25</td>
<td>Agriculture Bus. Management</td>
</tr>
<tr>
<td>Ag 26</td>
<td>Agriculture Business Organization and Management</td>
</tr>
<tr>
<td>Bus 2</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>Bus 3</td>
<td>Business Management</td>
</tr>
<tr>
<td>Bus 4</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>Bus 11</td>
<td>Personal Finance</td>
</tr>
<tr>
<td>Bus 12</td>
<td>Personal Income Tax</td>
</tr>
<tr>
<td>Bus 13</td>
<td>Applied Business Law</td>
</tr>
<tr>
<td>Bus 39</td>
<td>Office Procedures</td>
</tr>
</tbody>
</table>

**BUSINESS SUPERVISION**

Twenty-one units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 2</td>
<td>Introduction to Business</td>
</tr>
</tbody>
</table>

**BUSINESS—TRANSFER**

Twenty units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 1A</td>
<td>Principles of Accounting</td>
</tr>
<tr>
<td>Bus 1B</td>
<td>Principles of Accounting</td>
</tr>
<tr>
<td>Bus 5A</td>
<td>Business Law</td>
</tr>
<tr>
<td>Econ 1</td>
<td>Principles of Economics</td>
</tr>
<tr>
<td>Econ 2</td>
<td>Principles of Economics</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major (select a minimum of 3 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 2</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>Bus 5B</td>
<td>Business Law</td>
</tr>
<tr>
<td>Bus 9</td>
<td>Math. for Business Analysis</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
</tr>
<tr>
<td>Bus 26</td>
<td>Elementary Statistics</td>
</tr>
<tr>
<td>Bus 42</td>
<td>Business Correspondence</td>
</tr>
<tr>
<td>Bus 50</td>
<td>Introduction to Data Processing</td>
</tr>
</tbody>
</table>

**CARPENTRY**

Twenty-four units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carp 1</td>
<td>The Apprenticeship &amp; Math</td>
</tr>
<tr>
<td>Carp 2</td>
<td>Pre-job and Plot Planning</td>
</tr>
<tr>
<td>Carp 3</td>
<td>Rough Framing</td>
</tr>
<tr>
<td>Carp 4</td>
<td>Roof Framing</td>
</tr>
<tr>
<td>Carp 5</td>
<td>Interior and Exterior Finish</td>
</tr>
<tr>
<td>Carp 6</td>
<td>Stair Building</td>
</tr>
<tr>
<td>Carp 7</td>
<td>Concrete and Forms</td>
</tr>
<tr>
<td>Carp 8</td>
<td>Heavy Timber Construction and Welding</td>
</tr>
</tbody>
</table>

**COSMETOLOGY**

Forty-five units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cos 50A</td>
<td>Introduction to Cosmetology</td>
</tr>
<tr>
<td>Cos 50B</td>
<td>Introduction to Cosmetology</td>
</tr>
<tr>
<td>Cos 52A</td>
<td>Intermediate Cosmetology</td>
</tr>
<tr>
<td>Cos 52B</td>
<td>Intermediate Cosmetology</td>
</tr>
<tr>
<td>Cos 54A</td>
<td>Advanced Cosmetology</td>
</tr>
</tbody>
</table>

**DATA PROCESSING**

Twenty units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 1A</td>
<td>Principles of Accounting</td>
</tr>
<tr>
<td>Bus 1B</td>
<td>Principles of Accounting</td>
</tr>
<tr>
<td>Bus 50</td>
<td>Introduction to Data Processing</td>
</tr>
<tr>
<td>Bus 52</td>
<td>Computer Programming I</td>
</tr>
<tr>
<td>Bus 53</td>
<td>Computer Programming II</td>
</tr>
<tr>
<td>Bus 54</td>
<td>Data Processing Systems</td>
</tr>
</tbody>
</table>
### EARLY CHILDHOOD EDUCATION

Twenty-seven units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 20/</td>
<td>Developmental Psychology of Children</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 20</td>
<td>Early Childhood Socialization: Children, Family &amp; Community</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 21/</td>
<td>Principles of Child Development</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 22</td>
<td>Early Childhood Development and Observation</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 23/</td>
<td>Creative Learning Experience</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 24/T.A 24</td>
<td>for Young Children</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 25/</td>
<td>Field Experience</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 26/</td>
<td>The Art of Parenting</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 26</td>
<td>Administration and Supervision in Early Childhood Education</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 28/</td>
<td>Bilingual-Multicultural Curriculum and Instruction</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. Additional courses from the following list are recommended:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 29/</td>
<td>Child Development Associate: Intro. &amp; Initial Assessment</td>
<td>(2)</td>
</tr>
<tr>
<td>Psych 29</td>
<td>Developmental Psychology of Children</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 31/</td>
<td>Portfolio</td>
<td>(2)</td>
</tr>
<tr>
<td>Psych 1A</td>
<td>General Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 1B</td>
<td>Advanced General Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 3/TA 3</td>
<td>Social Adjustment</td>
<td>(3)</td>
</tr>
<tr>
<td>TA 6/ECE 6</td>
<td>Language Development for Young Children</td>
<td>(3)</td>
</tr>
<tr>
<td>TA 8/ECE 8</td>
<td>Mathematics for Young Children</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 16</td>
<td>The Psychology of Interpersonal Relationships</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 17</td>
<td>Social Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 27/</td>
<td>Understanding Exceptional</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 27/PL 1</td>
<td>Students</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 30</td>
<td>Psychology of Adolescence</td>
<td>(3)</td>
</tr>
</tbody>
</table>

### ENGINEERING TECHNOLOGY

Eighteen units required for the major

I. Required for the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engr 3</td>
<td>Descriptive Geometry</td>
<td>(3)</td>
</tr>
<tr>
<td>Engr 10</td>
<td>Engineering Problems</td>
<td>(3)</td>
</tr>
<tr>
<td>Engr 23</td>
<td>Hand Calculators &amp; Computations</td>
<td>(1)</td>
</tr>
<tr>
<td>Engr 65</td>
<td>Statics</td>
<td>(3)</td>
</tr>
<tr>
<td>Engr 72B</td>
<td>Surveying for Engineering Technology</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. Recommended as electives (do not fulfill major requirements)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astron 21</td>
<td>Elementary Astronomy</td>
<td>(3)</td>
</tr>
<tr>
<td>Engr 11</td>
<td>Basic Electricity</td>
<td>(3)</td>
</tr>
<tr>
<td>Engr 12</td>
<td>Architectural Drafting I</td>
<td>(3)</td>
</tr>
<tr>
<td>Engr 18A</td>
<td>Plane Surveying</td>
<td>(3)</td>
</tr>
<tr>
<td>Engr 18B</td>
<td>Advanced Surveying</td>
<td>(3)</td>
</tr>
<tr>
<td>Engr 55</td>
<td>Strengths of Materials</td>
<td>(3)</td>
</tr>
<tr>
<td>Math 2</td>
<td>Advanced Algebra &amp; Trigonometry</td>
<td>(5)</td>
</tr>
<tr>
<td>Math C</td>
<td>Plane Trigonometry</td>
<td>(3)</td>
</tr>
<tr>
<td>Math 47</td>
<td>Programming in Fortran</td>
<td>(3)</td>
</tr>
</tbody>
</table>

### ENGLISH

Eighteen units required for the major

I. Required courses for the major (12 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng 1A</td>
<td>Reading and Composition</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 1B</td>
<td>Introduction to Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 17AB OR</td>
<td>Survey of English Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 16AB</td>
<td>World Literature</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major (6 units from the following courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng 2</td>
<td>Intro. to English Linguistics</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 3/Hum 3</td>
<td>Introduction to Film History</td>
<td>(3)</td>
</tr>
<tr>
<td>MPP 3</td>
<td>and Criticism</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 8</td>
<td>Advanced Composition</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 9</td>
<td>Creative Writing</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 15</td>
<td>American Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 20AF</td>
<td>Studies in Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 25AF</td>
<td>Intro. to Shakespeare</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 30A</td>
<td>The Mexican American in Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 30B</td>
<td>The Mexican American in Literature</td>
<td>(3)</td>
</tr>
</tbody>
</table>

### FIRE SCIENCE

Twenty-one to 24 units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Sci 81</td>
<td>Introduction to Fire Science</td>
<td>(3)</td>
</tr>
<tr>
<td>Fire Sci 82</td>
<td>Fire Fighting Tactics &amp; Strategy</td>
<td>(3)</td>
</tr>
<tr>
<td>Fire Sci 83</td>
<td>Fire Hydraulics</td>
<td>(3)</td>
</tr>
<tr>
<td>Fire Sci 84</td>
<td>Fire Apparatus &amp; Equipment</td>
<td>(3)</td>
</tr>
<tr>
<td>Fire Sci 85</td>
<td>Fire Company Organization and Procedure</td>
<td>(3)</td>
</tr>
<tr>
<td>Fire Sci 86</td>
<td>Rescue Practices</td>
<td>(3)</td>
</tr>
<tr>
<td>Fire Sci 87</td>
<td>Fundamentals of Fire Prevention</td>
<td>(3)</td>
</tr>
</tbody>
</table>

*Math 51, or equivalent, required before registration in Fire Science 83.
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 French ............... (3)
- Fr 11 Intermediate Conversational French ............... (3)

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 Spanish .............. (3)
- Span 11 Advanced Conversational Spanish .............. (3)

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 Performance ............. (2)
- Fr 20B French Drama: Reading and Performance ............. (2)
- Fr 40 Introduction to French Civilization and Culture .............. (3)
- Fr 41 Introduction to French Civilization and Culture Beyond France .............. (3)
- 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 12 Advanced Conversational Spanish .......... (2)
- Span 24 Introduction to Spanish Literature (Conducted in Spanish) .............. (3)
- Span 25 Introduction to Spanish American Literature (Cond. in Spanish) .............. (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)

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.

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)

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
II. Acceptable courses for the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 21AB</td>
<td>Proficiency-Exit Typewriting</td>
<td>(2-2)</td>
</tr>
<tr>
<td>Bus 22</td>
<td>Machine Transcription</td>
<td>(1)</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 24</td>
<td>Records Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 41 OR</td>
<td>Essentials of Bus. Corresp.</td>
<td>(2 or 3)</td>
</tr>
<tr>
<td>Bus 42</td>
<td>Business Correspondence</td>
<td></td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major (minimum of 6 or 7 units required)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 10A</td>
<td>Practical Bookkeeping</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 13</td>
<td>Applied Business Law</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 25</td>
<td>Financial Record Typing</td>
<td>(2)</td>
</tr>
<tr>
<td>Bus 39</td>
<td>Office Procedures</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 40</td>
<td>Grammar and Usage</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 43</td>
<td>Bus. Correspondence in Spanish</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 50</td>
<td>Introduction to Data Processing</td>
<td>(3)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anat 8</td>
<td>Human Anatomy</td>
<td>(4)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro 1</td>
<td>Physical Anthropology</td>
<td>(3)</td>
</tr>
<tr>
<td>Astron 21</td>
<td>Elementary Astronomy</td>
<td>(3)</td>
</tr>
<tr>
<td>Astron 22</td>
<td>Intermediate Astronomy</td>
<td>(3)</td>
</tr>
<tr>
<td>Chem 1A</td>
<td>General Inorganic Chemistry</td>
<td>(5)</td>
</tr>
<tr>
<td>Chem 1B</td>
<td>General Inorganic Chemistry</td>
<td>(5)</td>
</tr>
<tr>
<td>Chem 5</td>
<td>Quantitative Chemistry</td>
<td>(4)</td>
</tr>
<tr>
<td>Chem 12</td>
<td>Organic Chemistry</td>
<td>(5)</td>
</tr>
<tr>
<td>Geog 1</td>
<td>Physical Geography</td>
<td>(3)</td>
</tr>
<tr>
<td>Geol 1A</td>
<td>Physical Geology</td>
<td>(4)</td>
</tr>
<tr>
<td>Math 2</td>
<td>Advanced Algebra &amp; Trigonometry</td>
<td>(5)</td>
</tr>
<tr>
<td>Math 3A</td>
<td>Analytic Geometry &amp; Calculus</td>
<td>(5)</td>
</tr>
<tr>
<td>Math 3B</td>
<td>Analytic Geometry &amp; Calculus</td>
<td>(5)</td>
</tr>
<tr>
<td>Math 4A</td>
<td>Calculus &amp; Differential Equations</td>
<td>(4)</td>
</tr>
<tr>
<td>Phys Sci 25</td>
<td>Introduction to Physical Science</td>
<td>(4)</td>
</tr>
<tr>
<td>Phys 2A</td>
<td>General Physics</td>
<td>(4)</td>
</tr>
<tr>
<td>Phys 2B</td>
<td>General Physics</td>
<td>(4)</td>
</tr>
<tr>
<td>or Phys 4A</td>
<td>Principles of Physics</td>
<td>(4)</td>
</tr>
<tr>
<td>Phys 4B</td>
<td>Principles of Physics</td>
<td>(4)</td>
</tr>
<tr>
<td>Phys 4C</td>
<td>Principles of Physics</td>
<td>(4)</td>
</tr>
</tbody>
</table>

GERONTOLOGY

Twenty-five units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geron 1</td>
<td>Fundamentals of Aging</td>
<td>(3)</td>
</tr>
<tr>
<td>Geron 2</td>
<td>Sociology of Aging</td>
<td>(3)</td>
</tr>
<tr>
<td>Geron 3</td>
<td>Psychology of Aging</td>
<td>(3)</td>
</tr>
<tr>
<td>Geron 4</td>
<td>Biology of Aging</td>
<td>(3)</td>
</tr>
<tr>
<td>Geron 5</td>
<td>Aging and the Quality of Life</td>
<td>(3)</td>
</tr>
<tr>
<td>Geron 11AB</td>
<td>Gerontology Practicum</td>
<td>(2-2)</td>
</tr>
<tr>
<td>Psych 1A</td>
<td>General Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Sociol 1</td>
<td>Principles of Sociology</td>
<td>(3)</td>
</tr>
</tbody>
</table>

GOVERNMENTAL MANAGEMENT — PUBLIC SERVICE ADMINISTRATION

Twenty-one to 22 units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 8</td>
<td>Personnel Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 70</td>
<td>Fundamentals of Governmental Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 71</td>
<td>State and Local Government Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 72</td>
<td>Finance Management</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major (select three courses from the following)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 6</td>
<td>Management Concepts of Supervision</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 7</td>
<td>Human Relations in Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 50</td>
<td>Introduction to Data Processing</td>
<td>(3)</td>
</tr>
<tr>
<td>WE Occ 82</td>
<td>Labor and the Economy</td>
<td>(4)</td>
</tr>
<tr>
<td>WE Occ 83</td>
<td>Laws Affecting Employees</td>
<td>(4)</td>
</tr>
</tbody>
</table>
MAJORS

GRAPHIC ARTS

Twenty-two units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA 10</td>
<td>Graphic Communication I</td>
<td>(2)</td>
</tr>
<tr>
<td>GA 11</td>
<td>Graphic Communication II</td>
<td>(3)</td>
</tr>
<tr>
<td>GA 12</td>
<td>Composition, Layout &amp; Paste-up</td>
<td>(3)</td>
</tr>
<tr>
<td>GA 20</td>
<td>Offset Printing I</td>
<td>(3)</td>
</tr>
<tr>
<td>GA 21</td>
<td>Offset Printing II</td>
<td>(3)</td>
</tr>
<tr>
<td>GA 22</td>
<td>Photography and Platemaking</td>
<td>(3)</td>
</tr>
<tr>
<td>GA 23</td>
<td>Bindery, Cutting and Distribution</td>
<td>(2)</td>
</tr>
<tr>
<td>GA 30</td>
<td>Graphics Plant Operation and Management Fundamentals</td>
<td>(3)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psych 1A</td>
<td>General Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 3/TA 3</td>
<td>Psychology of Personal and Social Adjustment</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 9/HR 9</td>
<td>Interviewing and Counseling</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 11A/HR 11A</td>
<td>Practicum</td>
<td>(3)</td>
</tr>
<tr>
<td>Sociol 1</td>
<td>Principles of Sociology</td>
<td>(3)</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro 2</td>
<td>Cultural Anthropology</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 6</td>
<td>Management Concepts of Supervision</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 7</td>
<td>Human Relations in Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 50</td>
<td>Introduction to Data Processing</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 79</td>
<td>Public Relations Techniques</td>
<td>(3)</td>
</tr>
<tr>
<td>HR 8/Psych 8</td>
<td>Personal and Career Development</td>
<td>(3)</td>
</tr>
<tr>
<td>HR 10/Psych 10 Small Group Leadership</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>Jrn 3</td>
<td>Mass Communications</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 1B</td>
<td>Advanced General Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 2</td>
<td>Introduction to Physiological Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 5</td>
<td>Psychology of Effective Behavior</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 11B/HR 11B</td>
<td>Practicum</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 12/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math 12/Bus 26 Elementary Statistics</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>Psych 14</td>
<td>Abnormal Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 15/</td>
<td>Social and Psychological</td>
<td>(3)</td>
</tr>
<tr>
<td>Sociol 15</td>
<td>Dynamics of Drug Use</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 16</td>
<td>The Psychology of Interpersonal Relationships</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 17/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociol 17</td>
<td>Social Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>Psych 20/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECE 20</td>
<td>Child Developmental Psychology of Children</td>
<td>(3)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 33A</td>
<td>Farm Power</td>
<td>(5)</td>
</tr>
<tr>
<td>Ag 33B</td>
<td>Farm Power</td>
<td>(5)</td>
</tr>
<tr>
<td>Ag 37</td>
<td>Small Gasoline Engines</td>
<td>(3)</td>
</tr>
<tr>
<td>Ag 35</td>
<td>Fluid Power</td>
<td>(4)</td>
</tr>
<tr>
<td>Auto Tech 52</td>
<td>Transmission Systems</td>
<td>(3)</td>
</tr>
<tr>
<td>Auto Tech 58</td>
<td>Automotive Air Conditioning</td>
<td>(3)</td>
</tr>
<tr>
<td>HM 36</td>
<td>Power Transmission Systems</td>
<td>(5)</td>
</tr>
</tbody>
</table>

Three (3) units to be selected from the following courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 50</td>
<td>Shop Mathematics</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 7</td>
<td>Technical &amp; Report Writing</td>
<td>(3)</td>
</tr>
<tr>
<td>Weld 30</td>
<td>Arc Welding</td>
<td>(3)</td>
</tr>
<tr>
<td>Weld 32</td>
<td>Oxy-Acetylene Welding</td>
<td>(3)</td>
</tr>
<tr>
<td>WE Gen 70</td>
<td>Personal Efficiency</td>
<td>(3)</td>
</tr>
<tr>
<td>WE Gen 71</td>
<td>Motivation</td>
<td>(3)</td>
</tr>
<tr>
<td>WE Gen 72</td>
<td>Labor and the Economy</td>
<td>(3)</td>
</tr>
<tr>
<td>WE Gen 73</td>
<td>Laws Affecting Employees</td>
<td>(3)</td>
</tr>
</tbody>
</table>

JOURNALISM

Twenty-one units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jrn 1</td>
<td>Introduction to Journalism</td>
<td>(3)</td>
</tr>
<tr>
<td>Jrn 2ABC</td>
<td>Advanced News &amp; Feature Writing</td>
<td>(4-4-4)</td>
</tr>
<tr>
<td>Jrn 3</td>
<td>Mass Communications</td>
<td>(3)</td>
</tr>
<tr>
<td>Jrn 5/Ph 5</td>
<td>Introduction to Photography</td>
<td>(3)</td>
</tr>
<tr>
<td>MPP 10/Eng 10</td>
<td>Introduction to Motion Picture Production</td>
<td>(3)</td>
</tr>
</tbody>
</table>
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 5/Ph 5 Introduction to Photography .... (3)
- Poly Sci 1 Introduction to Political Science (3)
- Poly Sci 2 American Government & Politics (3)
- Bus 20 Elementary Typewriting ............. (2)
- Sp 1 Oral Communication .................... (3)
- Eng 9AB Creative Writing ................... (3)
- Ph 8 Multi-Media .................................. (3)
- Eng 3/Hum 3 Introduction to Film History & Production .......... (3)
- MPP 3 Criticism .................................. (3)
- Jrn 4 Journalistic Issues ..................... (3)

*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 ................ (4)
- 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

Thirty-six units required for the major

I. Required courses for the major

- Bus 5A Business Law .................................. (3)
- LA 1 Intro. to Legal Assistants .................. (3)
- LA 2 Library Science & Legal Writing .......... (3)
- LA 3 Civil Procedures I .......................... (3)
- LA 5 Tort Law ....................................... (3)
- LA 6 Criminal Law ................................ (3)
- LA 7 Corporations and Taxation ................ (3)
- LA 8 Civil Discovery and Evidence ............. (3)
- LA 9 Family Law .................................... (3)
- LA 10 Bankruptcy—Creditor/Debtor ............. (3)
- LA 11 Real Estate Law for Legal Assistants .... (3)
- LA 12 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 General 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 30 Arc Welding ............................... (3)
- Weld 32 Oxy-Acetylene Welding ................. (3)

Six (6) units to be selected from the following courses:

- Ag 50 Shop Mathematics .......................... (3)
- Eng 7 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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 1A</td>
<td>Principles of Accounting</td>
<td>(4)</td>
</tr>
<tr>
<td>Bus 10A</td>
<td>Practical Bookkeeping</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 21AB</td>
<td>Proficiency—Exit Typewriting</td>
<td>(2-2)</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 65</td>
<td>Retail Sales Checking</td>
<td>(2)</td>
</tr>
<tr>
<td>Econ 1</td>
<td>Economics</td>
<td>(3)</td>
</tr>
<tr>
<td>Span 1</td>
<td>Elementary Spanish</td>
<td>(4)</td>
</tr>
</tbody>
</table>

**MATHEMATICS**

Eighteen units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 3A</td>
<td>Analytic Geometry &amp; Calculus</td>
<td>(5)</td>
</tr>
<tr>
<td>Math 3B</td>
<td>Analytic Geometry &amp; Calculus</td>
<td>(5)</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major

- Math C: Plane Trigonometry (3 units)
- Math 2: Advanced Algebra and Trigonometry (5 units)
- Math 4: Calculus & Differential Equations (4 units)
- Math 6: Linear Algebra (3 units)
- Math 12: Elementary Statistics (3 units)
- Math 47: Programming in FORTRAN (3 units)

*Either Math C or Math 2, but not both, are acceptable for the major.

III. Recommended as electives (do not fulfill major requirements)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem 1A</td>
<td>General Inorganic Chemistry</td>
<td>(5)</td>
</tr>
<tr>
<td>Engr 15</td>
<td>Statics</td>
<td>(3)</td>
</tr>
<tr>
<td>Engr 16</td>
<td>Dynamics</td>
<td>(3)</td>
</tr>
<tr>
<td>Phys 4A</td>
<td>Principles of Physics</td>
<td>(4)</td>
</tr>
<tr>
<td>Phys 4B</td>
<td>Principles of Physics</td>
<td>(4)</td>
</tr>
<tr>
<td>Phys 4C</td>
<td>Principles of Physics</td>
<td>(4)</td>
</tr>
</tbody>
</table>

NOTE: It is highly recommended that Math 4, Calculus and Differential Equations; and Math 6, Linear Algebra, be completed at Imperial Valley College.

**MEDICAL OFFICE ASSISTANT**

Twenty-two to twenty-three units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 21AB</td>
<td>Machine Typing</td>
<td>(2)</td>
</tr>
<tr>
<td>Bus 22</td>
<td>Machine Transcription</td>
<td>(1)</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 24</td>
<td>Records Management</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 41</td>
<td>Essentials of Bus. Corresp.</td>
<td></td>
</tr>
<tr>
<td>Bus 42</td>
<td>Business Correspondence</td>
<td>(2 or 3)</td>
</tr>
<tr>
<td>Bus 48</td>
<td>Medical Insurance</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 49A</td>
<td>Medical Terminology for Secretaries</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 49B</td>
<td>Medical Terminology for Secretaries</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major (select a minimum of 3 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 10A</td>
<td>Practical Bookkeeping</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 13</td>
<td>Applied Business Law</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 25</td>
<td>Financial Record Typing</td>
<td>(2)</td>
</tr>
<tr>
<td>Bus 39</td>
<td>Office Procedures</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 40</td>
<td>Grammar and Usage</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 43</td>
<td>Business Correspondence in Spanish</td>
<td>(3)</td>
</tr>
<tr>
<td>Bus 50</td>
<td>Introduction to Data Processing</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**MOTION PICTURE PRODUCTION**

Twenty-two units required for the major

I. Required courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ph 5/Jnr 5</td>
<td>Introduction to Photography</td>
<td>(3)</td>
</tr>
<tr>
<td>MPP 10/Eng 10</td>
<td>Introduction to Motion Picture Production</td>
<td>(3)</td>
</tr>
<tr>
<td>MPP 11</td>
<td>Intermediate Motion Picture Production</td>
<td>(3)</td>
</tr>
<tr>
<td>MPP 12</td>
<td>Advanced Motion Picture Production</td>
<td>(3)</td>
</tr>
<tr>
<td>MPP 13</td>
<td>TV Station Observation</td>
<td>(1)</td>
</tr>
<tr>
<td>Eng 3/Hum 3/1</td>
<td>Introduction to Film History and</td>
<td>(3)</td>
</tr>
<tr>
<td>Ph 8</td>
<td>Multi-Media</td>
<td>(3)</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major (three units required from the following courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 22A OR</td>
<td>Design</td>
<td>(3)</td>
</tr>
<tr>
<td>Art 22B</td>
<td>Design</td>
<td>(3)</td>
</tr>
<tr>
<td>Hum 25</td>
<td>The Humanities</td>
<td>(3)</td>
</tr>
<tr>
<td>Jnr 3</td>
<td>Mass Communications</td>
<td>(3)</td>
</tr>
<tr>
<td>Mus 30</td>
<td>Introduction to Music Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>Ph 8</td>
<td>Multi-Media</td>
<td>(3)</td>
</tr>
<tr>
<td>Eng 9AB</td>
<td>Creative Writing</td>
<td>(3)</td>
</tr>
<tr>
<td>Jnr 1</td>
<td>Introduction to Journalism</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**MUSIC**

Thirty-three 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)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus 8A</td>
<td>Beginning Musician</td>
<td>(2)</td>
</tr>
<tr>
<td>Mus 8B</td>
<td>Beginning Musician</td>
<td>(2)</td>
</tr>
<tr>
<td>Mus 8C</td>
<td>Intermediate Musician</td>
<td>(2)</td>
</tr>
<tr>
<td>Mus 8D</td>
<td>Intermediate Musician</td>
<td>(2)</td>
</tr>
<tr>
<td>Mus 9A</td>
<td>Beginning Harmony</td>
<td>(3)</td>
</tr>
<tr>
<td>Mus 9B</td>
<td>Beginning Harmony</td>
<td>(3)</td>
</tr>
<tr>
<td>Mus 9C</td>
<td>Intermediate Harmony</td>
<td>(3)</td>
</tr>
<tr>
<td>Mus 9D</td>
<td>Intermediate Harmony</td>
<td>(3)</td>
</tr>
</tbody>
</table>

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.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus 10A</td>
<td>Beginning Group Piano I</td>
<td>(1)</td>
</tr>
<tr>
<td>Mus 32AD</td>
<td>Applied Music</td>
<td>(1-1-1-1)</td>
</tr>
</tbody>
</table>

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 19 AF Instrumental Ensemble (2-2-2-2-2)
- 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 22A Introduction to Principles and Practices of Conducting (2)
- Mus 22B Conducting Principles and Practices (2)
- Mus 25AF Stage Band (2-2-2-2-2)
- Mus 26AD Rehearsal and Performance (1-1-1-1)
- Mus 29AF Estudiantina (2-2-2-2-2)
- Mus 31 Introduction to Twentieth Century Music (3)
- Mus 63AD Pep Band (1/2-1/2-1/2)
- Mus 64 College-Community Band (2)

NURSING
(Associate Degree/Registered)

Forty units required for the major

I. Required courses for the major

- ADN 1 Associate Degree Nursing (8)
- ADN 2 Associate Degree Nursing (8)
- ADN 3 Associate Degree Nursing (11)
- ADN 4 Associate Degree Nursing (11)
- ADN 5A Development of Contemporary Nursing (1)
- ADN 5B Nursing Trends & Opportunities (1)

Other courses required to complete ADN Program (28 units required)

- Anat 10 Human Anatomy & Physiology (5)
- Bio 21 Microbiology (4)
- Psych 1A General Psychology (3)
- Sociol 1 Principles of Sociology (3)
- Eng 1A Reading and Composition (3)
- *Soc Sci 52 Introduction to American Government (3)
- Learning Skills (Communications) Elective (3)
- Humanities Elective (1)
- Psych 35 Developmental Psychology: Conception to Death (3)

II. Acceptable courses for the major

Anat 8 (4 units) and Physio 1 (4 units) may be substituted for Anat 10. This elective substitution must be completed before entering the major.

*Students expecting to transfer to a state senior college are advised to take six units of "American Institutions" electives instead.

NURSING
(Vocational)

Fifty-one units required for the major

I. Required courses for the major

- Psych 5 Psychology of Effective Behavior (3)
- VN 50 Medical-Surgical Nursing I (7)
- VN 51 Clinical Fundamentals (7)
- VN 52 Medical-Surgical Nursing II (5)
- VN 53 Maternal-Child Health Nursing (7)
- VN 54 Clinical Fundamentals (7)
- VN 55 Medical-Surgical Nursing III (10)
- VN 58 Clinical Fundamentals (7)

II. Recommended as electives (do not fulfill major requirements)

- Anat 8 Human Anatomy (4)
- Anat 10 Human Anatomy & Physiology (5)
- Bio 3 Principles of Biological Science (4)
- Bio 21 General Microbiology (4)
- Chem 2A Introduction to Chemistry (4)
- Physio 1 Human Physiology (4)
- Psych 1A General Psychology (3)
- Psych 35 Developmental Psychology: Conception to Death (3)
- Soc Sci 52 Introduction to American Government (3)
- Sociol 1 Principles of Sociology (3)

PHOTOGRAPHY

Twenty-one units required for the major

I. Required courses for the major

- Jn 3 Mass Communications (3)
- Ph 5/Jn 5 Introduction to Photography (3)
- Ph 6 Intermediate Photography (3)
- Ph 7 Advanced Photography (3)
- MPP 10/ Production
- Eng 10 OR Production
- Eng 3/Hum 3/ Introduction to Film History
- MPP 3 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)
- Jn 1 Introduction to Journalism (3)
- Ph 8 Multi-Media (3)
- Eng 10/ Production
- MPP 10 OR Production
- Eng 3/Hum 3/ Introduction to Film History
- MPP 3 Criticism (3)

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 (3)
- 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)
- 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 (1-1-1-1)
- PE 14ABCD: Recreational Games, Coed (1-1-1-1)
- PE 15ABCD: Figure Control for Women (1-1-1-1)
- PE 16ABCD: Group Sidekling (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 (1-1-1-1)
- PE 19B: Karate, Coed (1-1-1-1)
- 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 39ABCD: College Rodeo (2-2-2-2)
- PE 40ABCD: Synchronized Swimming (2-2-2-2)
- PE 41AB: Intercollegiate Volleyball and PE (2-2)
- PE 42AB: Intercollegiate Soccer and PE (2-2)
- PE 44/LE 23: Defensive Tactics (1)
- PE 47: Coaching Techniques of Wrestling (2)
- PE 50: 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 (1-1-1-1)
- 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: Man and His Environment (3)
- Geog 1: Physical Geography (3)
- Geol 1A: Physical Geology (4)
- Phys 2AB: Introduction to Physical Science (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 7: Technical and Report Writing (3)
- Weld 30: Arc Welding (3)
- Weld 32: Oxy-Acetylene Welding (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)

REAL ESTATE

Twenty-seven units required for the major

I. Required courses for the major

- Bus 90: Real Estate Principles (3)
- Bus 91: Real Estate Practices (3)
- Bus 92A: Legal Aspects of Real Estate (3)
- Bus 92B: Legal Aspects of Real Estate (3)
- Bus 93: Real Estate Finance (3)
- Bus 94: Real Estate Appraisal (3)
- Bus 94A: Real Estate Appraisal (3)
- Bus 95: Real Estate Economics (3)
MAJORS

II. Acceptable courses for the major (3 units from the following courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 1A</td>
<td>Principles of Accounting</td>
<td>4</td>
</tr>
<tr>
<td>Bus 2</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>Bus 5A</td>
<td>Business Law</td>
<td>3</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major (2 units to be selected from the following courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL 33</td>
<td>Introduction to Audiology</td>
<td>3</td>
</tr>
<tr>
<td>PL 34</td>
<td>Audiometry and Hearing</td>
<td>3</td>
</tr>
</tbody>
</table>

Option C

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HA 15A OR</td>
<td>Hospital Nursing Assistant</td>
</tr>
<tr>
<td>HA 15B OR</td>
<td>Community Health Aide</td>
</tr>
<tr>
<td>HA 15C</td>
<td>Developmental Disability/Mental Retardation Aide</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 62AB</td>
<td>Physical Education for Special Olympics</td>
<td>3-3</td>
</tr>
<tr>
<td>PL 2B</td>
<td>Practicum Experience to Work with the Physically Limited Person</td>
<td>2</td>
</tr>
<tr>
<td>PL 12</td>
<td>Advanced Communication with the Deaf</td>
<td>3</td>
</tr>
<tr>
<td>PL 13AD</td>
<td>Communication with the Deaf in the College Classroom</td>
<td>1-1-1-1</td>
</tr>
<tr>
<td>PL 30</td>
<td>Intro. to Speech &amp; Language</td>
<td>3</td>
</tr>
<tr>
<td>PL 31</td>
<td>Interview and Testing Techniques for Speech &amp; Hearing Problems</td>
<td>3</td>
</tr>
<tr>
<td>PL 32</td>
<td>Behavior Modification Techniques for Speech &amp; Hearing Pathology</td>
<td>3</td>
</tr>
<tr>
<td>PL 40</td>
<td>Introduction to Physical Therapy</td>
<td>3</td>
</tr>
<tr>
<td>PL 41</td>
<td>intro. to Occupational Therapy</td>
<td>3</td>
</tr>
<tr>
<td>Psych 3</td>
<td>Psychology of Personal and Social Adjustment</td>
<td>3</td>
</tr>
<tr>
<td>Psych 9</td>
<td>Interviewing and Counseling</td>
<td>3</td>
</tr>
<tr>
<td>Rec 73</td>
<td>Recreation for Special Groups</td>
<td>4</td>
</tr>
<tr>
<td>Sociol 1</td>
<td>Principles of Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Sp 1</td>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Sp 30</td>
<td>Voice &amp; Articulation Development</td>
<td>3</td>
</tr>
</tbody>
</table>

SECRETARIAL*

Twenty or 21 units required for the major

I. Required for the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 21AB</td>
<td>Proficiency-Exit Typing</td>
<td>2-2</td>
</tr>
<tr>
<td>Bus 22</td>
<td>Machine Transcription</td>
<td>1</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus 24</td>
<td>Records Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus 32AB</td>
<td>Dictation &amp; Transcription Lab</td>
<td>3-3</td>
</tr>
<tr>
<td>Bus 39</td>
<td>Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>Bus 40</td>
<td>Grammar and Usage</td>
<td>3</td>
</tr>
<tr>
<td>Bus 41 or</td>
<td>Essentials of Business</td>
<td>3</td>
</tr>
<tr>
<td>Bus 42</td>
<td>Business Correspondence</td>
<td>3</td>
</tr>
</tbody>
</table>

*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.

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro 1</td>
<td>Physical Anthropology</td>
</tr>
<tr>
<td>Anthro 2</td>
<td>Cultural Anthropology</td>
</tr>
<tr>
<td>Anthro 3A</td>
<td>Introduction to Archaeological</td>
</tr>
<tr>
<td>Anthro 3B</td>
<td>Introduction to Archaeological</td>
</tr>
</tbody>
</table>

Excavations |

Archaeological

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro 3B</td>
<td>Introduction to Archaeological</td>
</tr>
</tbody>
</table>

Excavations |
### MAJORS

#### Anthropology
- 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 30: Agricultural Mechanics (3)
- Ag 32: Irrigation and Drainage (3)
- Ag 35: Fluid Power (3)
- 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 30: Arc Welding (3)
- Weld 32: Oxy-Acetylene Welding (3)
- 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)

### SPEECH PATHOLOGY AND AUDIOLOGY

Twenty-four units required for the major

I. Required courses for the major
- Sp 1 OR: Oral Communication
- Sp 2: Intermediate Public Speaking (3)
- Sp 30: Voice & Articulation Development (3)
- PL 30: Intro. to Speech and Language (3)
- PL 31: Interview and Testing Techniques for Speech & Hearing Problems (3)
- PL 32: Behavior Modification Techniques for Speech & Hearing Pathology (3)
- PL 33: Introduction to Audiology (3)
- PL 34: Audiology and Hearing Conservation (3)

II. Recommended as electives (do not fulfill major requirements)
- Math A: Intermediate Algebra (3)
- Phys Sci 25: Intro. to Physical Science (4)
- Psych 1A: General Psychology (3)
- Psych 2: Physiological Psychology (3)
- Psych 20: Developmental Psychology of Children (3)

### 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: Developmental Psychology of Children (3)
- TA 24/ECE 24: Creative Learning Experiences (3)
- Psych 24: 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:

<table>
<thead>
<tr>
<th>Agriculture</th>
<th>History</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>Home Economics</td>
<td>Music</td>
</tr>
<tr>
<td>Business</td>
<td>Industrial Arts</td>
<td>Physical Education</td>
</tr>
<tr>
<td>English</td>
<td>Languages</td>
<td>Physical Science</td>
</tr>
<tr>
<td>Government</td>
<td>Life Sciences</td>
<td>Social Science</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Early Childhood Education</th>
<th>Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilingual-Cross Cultural</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Special Education including learning handicapped, educationally handicapped, mentally retarded, physically handicapped, speech and hearing disorders.</td>
<td></td>
</tr>
</tbody>
</table>

SERVICES CREDENTIALS

These also require advanced preparation after the individual has a valid teaching credential.

<table>
<thead>
<tr>
<th>Pupil Personnel</th>
<th>Librarian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Administrative</td>
</tr>
</tbody>
</table>

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 four multiple subject groups of knowledge identified below.

The Liberal Studies Major is also recommended for students who plan to enter elementary education. It may meet lower division requirements for the multiple subject diversified major as specified in the Ryan Act.

To complete the lower division preparation for transferring to the four-year college or university, a minimum of 56 units are needed to make formal application to the school of your choice. SEE A COUNSELOR.

I. Forty-three to fifty-seven units required for the major
   1. English: (12-15 units required)
      a. Eng 1A (3), Eng 1B (3), Eng 2 (3), Sp 1 (3)
      b. English elective (if required) (3)
   2. Math and Science: (7-12 units required)
      a. Bio 3 (4), Astron 21 (3), Math 10 (if required) (3)
      b. Minimum of 3 units to include courses from the following: Anat 8; Anthro 1; Bio 21; Chem 1A; Chem 2A; Geog 1; Phys 2A; Phys 4A; Zool 1A
   3. Social Science: (12-15 units required)
      a. Hist 17A and Hist 17B (3) or Poly Sci 1 and Poly Sci 2 (3)
      b. Minimum of 6 units to include courses from the following: Anthro 2; Econ 1; Econ 2; Geog 2; Hist 30; Psych 1A; Sociol 1
   4. Fine Arts and Humanities: (12-15 units required)
      a. Art 20A or Art 22A (3); Music 7 (3)
      b. Three units to include courses from the following: Art 3A; Art 3B; Phil 1A; Phil 1B; Phil 25; Hist 4A; Hist 4B
      c. Minimum of 3 units in a Foreign Language course

II. Recommended courses for the major (not required)
   1. HE 1 (3), PE 61 (3)

WATER TREATMENT TECHNOLOGY

Twenty-five 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 3 Waste Water Treatment I ................................. (4)
   WT 4 Waste Water Treatment II ............................. (4)
   WT 6 Computational Procedures for Treatment Plant Operator I ....... (3)
   WT 7 Computational Procedures for Treatment Plant Operator II .......... (3)
   WT 8 Computational Procedures for Treatment Plant Operator III .......... (3)

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, 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-four units required for the major

I. Required courses for the major
   Weld 30 Arc Welding ............................................. (3)
   Weld 32 Oxy-Acetylene Welding ............................... (3)
   Weld 34 Gas Shielded Arc Welding ............................ (3)
   Weld 36A Advanced Welding ................................. (3)
## CERTIFICATE PROGRAMS

### FIELD ARCHAEOLOGY
**Certificate Program**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro 1</td>
<td>Physical Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Anthro 2</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Anthro 3A</td>
<td>Introduction to Archaeological Site Surveying</td>
<td>3</td>
</tr>
<tr>
<td>Anthro 3B</td>
<td>Introduction to Archaeological Excavation</td>
<td>3</td>
</tr>
<tr>
<td>Anthro 3C</td>
<td>Advanced Archaeological Survey</td>
<td>3</td>
</tr>
<tr>
<td>Anthro 3D</td>
<td>Advanced Archaeological Excavation</td>
<td>3</td>
</tr>
<tr>
<td>Anthro 4</td>
<td>California Indians</td>
<td>3</td>
</tr>
<tr>
<td>Anthro 5</td>
<td>Archaeology: Theory, Prehistory and Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>Bio 3 OR</td>
<td>Principles of Biological Science</td>
<td>4</td>
</tr>
<tr>
<td>Bot 1A</td>
<td>General Botany</td>
<td>3</td>
</tr>
<tr>
<td>Eng 1A</td>
<td>Reading and Composition</td>
<td>3</td>
</tr>
<tr>
<td>Geog 1 OR</td>
<td>Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>Geol 11</td>
<td>General Geology: An Introduction to Geology</td>
<td>3</td>
</tr>
<tr>
<td>Ph 5/Jrn 5</td>
<td>Introduction to Photography</td>
<td>3</td>
</tr>
<tr>
<td>Zool 1A</td>
<td>General Zoology</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Computer Science or Statistics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Units</td>
<td>44</td>
</tr>
</tbody>
</table>

### AUTOMOTIVE TECHNOLOGY
**Certificate Program**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Tech 50</td>
<td>Shop Math (if required)</td>
<td>3</td>
</tr>
<tr>
<td>Auto Tech 51</td>
<td>Engine Technology, or equivalent</td>
<td>5</td>
</tr>
<tr>
<td>Auto Tech 52</td>
<td>Manual Transmissions and Power Trains</td>
<td>3</td>
</tr>
<tr>
<td>Auto Tech 53</td>
<td>Brakes and Suspension</td>
<td>3</td>
</tr>
<tr>
<td>Auto Tech 54</td>
<td>Carburetors, Fuel and Exhaust Systems</td>
<td>3</td>
</tr>
<tr>
<td>Auto Tech 55</td>
<td>Gasoline and Diesel Engines</td>
<td>5</td>
</tr>
<tr>
<td>Auto Tech 60</td>
<td>Electrical, Starting, Charging, Ignitions &amp; Related Electrical Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

### AUTO BODY REPAIR AND PAINTING
**Certificate Program**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Tech 56</td>
<td>Diagnostics</td>
<td>3</td>
</tr>
<tr>
<td>Auto Tech 57</td>
<td>Fluid Power</td>
<td>4</td>
</tr>
<tr>
<td>Auto Tech 58</td>
<td>Automotive Air-Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>Auto Tech 59</td>
<td>Small Gasoline Engines</td>
<td>3</td>
</tr>
<tr>
<td>Auto Tech 61</td>
<td>Automatic Transmissions</td>
<td>3</td>
</tr>
</tbody>
</table>

### BANKING
**Certificate Programs**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 1A</td>
<td>Principles of Accounting</td>
<td>4</td>
</tr>
<tr>
<td>Bus 1B</td>
<td>Principles of Accounting</td>
<td>4</td>
</tr>
<tr>
<td>Bus 6</td>
<td>Management Concepts of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>Bus 7</td>
<td>Human Relations in Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus 60</td>
<td>Principles of Bank Operations</td>
<td>3</td>
</tr>
<tr>
<td>Bus 5A</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>Bus 42</td>
<td>Business Correspondence</td>
<td>3</td>
</tr>
<tr>
<td>Econ 1</td>
<td>Principles of Economics</td>
<td>3</td>
</tr>
<tr>
<td>Sp 1</td>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Units</td>
<td>23</td>
</tr>
</tbody>
</table>

### CREDIT ADMINISTRATION CERTIFICATE IN BANKING

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 1A</td>
<td>Principles of Accounting</td>
<td>4</td>
</tr>
<tr>
<td>Bus 1B</td>
<td>Principles of Accounting</td>
<td>4</td>
</tr>
<tr>
<td>Bus 60</td>
<td>Principles of Bank Operations</td>
<td>3</td>
</tr>
<tr>
<td>Bus 61</td>
<td>Analysis of Financial Statements</td>
<td>3</td>
</tr>
<tr>
<td>Bus 62</td>
<td>Installment Credit</td>
<td>3</td>
</tr>
<tr>
<td>Bus 5A</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>Bus 7</td>
<td>Human Relations in Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus 42</td>
<td>Business Correspondence</td>
<td>3</td>
</tr>
</tbody>
</table>

II. Acceptable courses for the certificate

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Tech 50</td>
<td>Shop Mathematics, if required</td>
<td>3</td>
</tr>
<tr>
<td>Auto Body 70</td>
<td>Auto Body Repairing &amp; Painting</td>
<td>5</td>
</tr>
<tr>
<td>Auto Body 71</td>
<td>Advanced Auto Body Repair and Painting</td>
<td>5</td>
</tr>
</tbody>
</table>

The following courses may be substituted for any of the above required courses except Auto Body 70 and Auto Body 71:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Tech 54</td>
<td>Electrical and Fuel Systems</td>
<td>3</td>
</tr>
<tr>
<td>Auto Tech 58</td>
<td>Automotive Air-Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>Weld 34</td>
<td>Inert Gas Shielded Arc Welding</td>
<td>3</td>
</tr>
</tbody>
</table>
### CERTIFICATE PROGRAMS

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 63</td>
<td>Financing Business Enterprises</td>
<td>3</td>
</tr>
<tr>
<td>Bus 64</td>
<td>Agricultural Finance</td>
<td>3</td>
</tr>
<tr>
<td>Econ 1</td>
<td>Principles of Economics</td>
<td>3</td>
</tr>
<tr>
<td>Sp 1</td>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Units</strong></td>
<td>23</td>
</tr>
</tbody>
</table>

**GENERAL CERTIFICATE IN BANK SERVICES***

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 5A</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>Bus 10A</td>
<td>Practical Bookkeeping**</td>
<td>3</td>
</tr>
<tr>
<td>Bus 21AB</td>
<td>Proficiency—Exit Typewriting*</td>
<td>2-2</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus 40</td>
<td>Grammar and Usage</td>
<td>3</td>
</tr>
<tr>
<td>Bus 60</td>
<td>Principles of Bank Operations</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Select any two of the following electives</strong></td>
<td></td>
</tr>
<tr>
<td>Bus 7</td>
<td>Human Relations in Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus 39</td>
<td>Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>Bus 41</td>
<td>Essentials of Business Correspondence</td>
<td>2</td>
</tr>
<tr>
<td>Bus 50</td>
<td>Introduction to Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>Sp 1</td>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Units</strong></td>
<td>22-23</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 5A</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>Bus 21AB</td>
<td>Proficiency—Exit Typewriting*</td>
<td>2-2</td>
</tr>
<tr>
<td>Bus 32AB</td>
<td>Diction and Transcription Lab**</td>
<td>3-3</td>
</tr>
<tr>
<td>Bus 40</td>
<td>Grammar and Usage</td>
<td>3</td>
</tr>
<tr>
<td>Bus 41</td>
<td>Essentials of Business Correspondence</td>
<td>2 or 3</td>
</tr>
<tr>
<td>Bus 42</td>
<td>Business Correspondence</td>
<td>2 or 3</td>
</tr>
<tr>
<td>Bus 60</td>
<td>Principles of Bank Operations</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Select any two of the following electives</strong></td>
<td></td>
</tr>
<tr>
<td>Bus 7</td>
<td>Human Relations in Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus 39</td>
<td>Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>Bus 50</td>
<td>Introduction to Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>Sp 1</td>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Units</strong></td>
<td>22 or 23</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 10A</td>
<td>Practical Bookkeeping</td>
<td>3</td>
</tr>
<tr>
<td>Bus 21AB</td>
<td>Proficiency—Exit Typewriting*</td>
<td>2-2</td>
</tr>
<tr>
<td>Bus 22</td>
<td>Machine Typewriting</td>
<td>1</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus 24</td>
<td>Records Management</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Business Electives</strong></td>
<td>8</td>
</tr>
</tbody>
</table>

### Clerk Typist:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 21AB</td>
<td>Proficiency-Exit Typewriting</td>
<td>2-2</td>
</tr>
<tr>
<td></td>
<td>(50 wpm skill level required)</td>
<td></td>
</tr>
<tr>
<td>Bus 22</td>
<td>Machine Typewriting</td>
<td>1</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus 24</td>
<td>Records Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus 39</td>
<td>Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>Math 51</td>
<td>Business Electives</td>
<td>8</td>
</tr>
<tr>
<td>Eng 51</td>
<td>Practical Bookkeeping</td>
<td>3</td>
</tr>
<tr>
<td>Eng 56B</td>
<td>Writing Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Units</strong></td>
<td>23-28</td>
</tr>
</tbody>
</table>

### Secretary Stenographer:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 21AB</td>
<td>Proficiency-Exit Typewriting</td>
<td>2-2</td>
</tr>
<tr>
<td></td>
<td>(60 wpm skill level required)</td>
<td></td>
</tr>
<tr>
<td>Bus 22</td>
<td>Machine Typewriting</td>
<td>1</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus 24</td>
<td>Records Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus 32AB</td>
<td>Dication &amp; Transcription Lab</td>
<td>3-3</td>
</tr>
<tr>
<td></td>
<td>(90 wpm skill level required)</td>
<td></td>
</tr>
<tr>
<td>Bus 39</td>
<td>Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>Bus 40</td>
<td>Grammar &amp; Usage</td>
<td>3</td>
</tr>
<tr>
<td>Bus 41</td>
<td>Essentials of Bus. Corres.</td>
<td>3</td>
</tr>
<tr>
<td>Bus 42</td>
<td>Business Correspondence</td>
<td>2 or 3</td>
</tr>
<tr>
<td>Eng 3 OR</td>
<td>Basic English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Eng 4A</td>
<td>Reading and Composition</td>
<td>3</td>
</tr>
<tr>
<td>Math 51</td>
<td>Basic Mathematics (if required)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Units</strong></td>
<td>23-32</td>
</tr>
</tbody>
</table>

### Bookkeeper-Technician:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 10A</td>
<td>Practical Bookkeeping</td>
<td>3</td>
</tr>
<tr>
<td>Bus 10B</td>
<td>Practical Bookkeeping</td>
<td>3</td>
</tr>
<tr>
<td>Bus 23</td>
<td>Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus 24</td>
<td>Records Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus 25</td>
<td>Financial Records Typing</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Business Electives</strong></td>
<td>6</td>
</tr>
<tr>
<td>Math 51</td>
<td>Basic Mathematics (if required)</td>
<td>3</td>
</tr>
<tr>
<td>Eng 51</td>
<td>Practical Bookkeeping</td>
<td>3</td>
</tr>
<tr>
<td>Eng 56B</td>
<td>Writing Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Units</strong></td>
<td>23-26</td>
</tr>
</tbody>
</table>

### CARPENTRY Certificate Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carp 1</td>
<td>The Apprenticeship and Math</td>
<td>3</td>
</tr>
<tr>
<td>Carp 2</td>
<td>Pre-job and Plot Planning</td>
<td>3</td>
</tr>
<tr>
<td>Carp 3</td>
<td>Rough Framing</td>
<td>3</td>
</tr>
<tr>
<td>Carp 4</td>
<td>Roof Framing</td>
<td>3</td>
</tr>
<tr>
<td>Carp 5</td>
<td>Interior and Exterior Finish</td>
<td>3</td>
</tr>
<tr>
<td>Carp 6</td>
<td>Stair Building</td>
<td>3</td>
</tr>
<tr>
<td>Carp 7</td>
<td>Concrete and Forms</td>
<td>3</td>
</tr>
<tr>
<td>Carp 8</td>
<td>Heavy Timber Construction and Welding</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Units</strong></td>
<td>24</td>
</tr>
</tbody>
</table>

### COSMETOLOGY Certificate Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cos 50A</td>
<td>Introduction to Cosmetology</td>
<td>10</td>
</tr>
<tr>
<td>Cos 50B</td>
<td>Introduction to Cosmetology</td>
<td>10</td>
</tr>
<tr>
<td>Cos 52A</td>
<td>Intermediate Cosmetology</td>
<td>10</td>
</tr>
<tr>
<td>Cos 52B</td>
<td>Intermediate Cosmetology</td>
<td>10</td>
</tr>
<tr>
<td>Cos 54A</td>
<td>Advanced Cosmetology</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>Total Units</strong></td>
<td>45</td>
</tr>
</tbody>
</table>
### EARLY CHILDHOOD EDUCATION

#### Certificate Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 20/Psych 20</td>
<td>Developmental Psychology of Children</td>
<td>3</td>
</tr>
<tr>
<td>ECE 21/Psych 21</td>
<td>Early Childhood Socialization: Children, Family &amp; Community</td>
<td>3</td>
</tr>
<tr>
<td>ECE 22/Psych 22</td>
<td>Principles of Child Development and Observation</td>
<td>3</td>
</tr>
<tr>
<td>ECE 23/Psych 23</td>
<td>Early Childhood Development Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>ECE 25/Psych 25</td>
<td>Field Experience</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

#### ELECTRONICS

#### Certificate Program

**Basic Electronics:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics 1A</td>
<td>Basic Electronics</td>
<td>4</td>
</tr>
<tr>
<td>Electronics 1B</td>
<td>Electronics Assembly &amp; Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>Electronics 2</td>
<td>Transistors &amp; Semi-conductors</td>
<td>5</td>
</tr>
<tr>
<td>Electronics 3</td>
<td>FCC 2nd Class Radiotelephone</td>
<td></td>
</tr>
<tr>
<td>Electronics 5</td>
<td>Practical Digital Electronics</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

**Intermediate Electronics Certificate:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics 4</td>
<td>FCC 1st Class Radiotelephone</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td></td>
<td>21</td>
</tr>
</tbody>
</table>

### EMERGENCY MEDICAL TECHNICIAN

#### Certificate Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMT 1/A</td>
<td>Emergency Medical Technician 1/ Ambulance</td>
<td>5.5</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td></td>
<td>5.5</td>
</tr>
</tbody>
</table>

### FIRE SCIENCE

#### Certificate Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Sci 81</td>
<td>Introduction to Fire Science</td>
<td>3</td>
</tr>
<tr>
<td>Fire Sci 82</td>
<td>Fire Fighting Tactics &amp; Strategy</td>
<td>3</td>
</tr>
<tr>
<td>Fire Sci 83</td>
<td>Fire Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>Fire Sci 84</td>
<td>Fire Apparatus and Equipment</td>
<td>3</td>
</tr>
<tr>
<td>Fire Sci 85</td>
<td>Fire Company Organization and Procedures</td>
<td>3</td>
</tr>
<tr>
<td>Fire Sci 86</td>
<td>Rescue Practices</td>
<td>3</td>
</tr>
<tr>
<td>Fire Sci 87</td>
<td>Fundamentals of Fire Prevention</td>
<td>3</td>
</tr>
<tr>
<td>*Math 51</td>
<td>Basic Mathematics, or equivalent</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td></td>
<td>21-24</td>
</tr>
</tbody>
</table>

*Math 51 or equivalent required before registration in Fire Science 83.

### GERONTOLOGY

#### Certificate Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geron 1</td>
<td>Fundamentals of Aging</td>
<td>3</td>
</tr>
<tr>
<td>Geron 2</td>
<td>Sociology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>Geron 3</td>
<td>Psychology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>Geron 4</td>
<td>Biology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>Geron 5</td>
<td>Aging and the Quality of Life</td>
<td>3</td>
</tr>
<tr>
<td>Geron 11AB</td>
<td>Gerontology Practicum</td>
<td>2-2</td>
</tr>
<tr>
<td>Psych 1A</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Sociol 1</td>
<td>Principles of Sociology</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>

### GOVERNMENTAL MANAGEMENT—PUBLIC SERVICE ADMINISTRATION

#### Certificate Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 8</td>
<td>Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus 70</td>
<td>Fundamentals of Governmental Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus 71</td>
<td>State and Local Government Management</td>
<td>3</td>
</tr>
<tr>
<td>Bus 72</td>
<td>Finance Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Select any three of the following courses:

- Management Concepts of Supervision (3 units)
- Human Relations in Management (3 units)
- Introduction to Data Processing (3 units)
- Labor and the Economy (3 units)

**Total Units** 21-23

### GRAPHIC ARTS — MULTI-MEDIA

#### Certificate Program

Fourteen units required

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA 10</td>
<td>Graphic Communications I</td>
<td>2</td>
</tr>
<tr>
<td>GA 11</td>
<td>Graphic Communications II</td>
<td>3</td>
</tr>
<tr>
<td>GA 12</td>
<td>Composition, Layout and Paste-up</td>
<td>3</td>
</tr>
<tr>
<td>GA 22 OR</td>
<td>Photography and Platemaking</td>
<td>3</td>
</tr>
<tr>
<td>GA 20</td>
<td>Offset Printing I</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>

### GRAPHIC ARTS — PRINTING

Eleven units required

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA 20</td>
<td>Offset Printing I</td>
<td>3</td>
</tr>
<tr>
<td>GA 21</td>
<td>Offset Printing II</td>
<td>3</td>
</tr>
<tr>
<td>GA 22</td>
<td>Photography and Platemaking</td>
<td>3</td>
</tr>
<tr>
<td>GA 23</td>
<td>Bindery, Cutting &amp; Distribution</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

### HEALTH AIDE

#### Certificate Program

Required courses for all certificates:

- Psych 5   Psychology of Effective Behavior (3 units)
  (or Psych 1A, if eligible)
- Eng 51    The Communication Process (3 units)
  (or Eng 1A, if eligible)
- PE        Physical Education, if required (1 unit)

**and**

Health Aide course according to certificate desired:

- HA 15A OR Hospital Nursing Assistant (6-7 units)
- HA 15B OR Community Health Aide
- HA 15C OR Developmental Disability/Mental Retardation Aide
- HA 15D OR Mental Health Aide
- HA 15E OR Patient Education Technician (9 units)

**Total Units** 15-16
**HEAVY MACHINERY Certificate Program**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HM 35</td>
<td></td>
</tr>
<tr>
<td>HM 36</td>
<td></td>
</tr>
<tr>
<td>Ag 33A</td>
<td></td>
</tr>
<tr>
<td>Ag 33B</td>
<td></td>
</tr>
<tr>
<td>Ag 35</td>
<td></td>
</tr>
<tr>
<td>Ag 37</td>
<td></td>
</tr>
<tr>
<td>Total Units</td>
<td>27</td>
</tr>
</tbody>
</table>

and eight (8) units to be selected from the following courses:

- Ag 50: Shop Mathematics 3
- Weld 30: Arc Welding 3
- Weld 32: Oxy-Acetylene 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
- Total Units: 35

**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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psych 1A</td>
<td></td>
</tr>
<tr>
<td>Psych 3/TAs</td>
<td></td>
</tr>
<tr>
<td>Psych 9/HR 9</td>
<td></td>
</tr>
<tr>
<td>Psych 11AB</td>
<td></td>
</tr>
<tr>
<td>HR 11AB</td>
<td>3-3</td>
</tr>
<tr>
<td>Sociol 1</td>
<td></td>
</tr>
<tr>
<td>Total Units</td>
<td>36</td>
</tr>
</tbody>
</table>

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
- Jnr 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 11AB: Practicum 3-3
- Psych 12:         |
- Psych 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
- Psych 26:         |
- ECE 26:         |
- Psych 30:         |
- Psych 35:         |
- Psych 40:         |
- Psych 46:         |
- LE 46:         |
- Sociol 2:         |
- Sociol 41:         |
- LE 41:         |
- Total Units: 24

**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 38: Principles and Procedures of the Justice System 3
- LE 37: Juvenile Control 3
- LE 38: Community Relations 3
- Total Units: 18

**LEGAL ASSISTANT Certificate Program**

- Bus 5A: Business Law 3
- LA 1: Introduction to Legal Assistants 3
- LA 2: Library Science & Legal Writing 3
- LA 3: Civil Procedures I 3
- LA 5: Tort Law 3
- LA 6: Criminal Law 3
- LA 7: Corporations and Taxation 3
- LA 8: Civil Discovery and Evidence 3
- LA 9: Family Law 3
- LA 10: Bankruptcy—Creditor/Debtor 3
- LA 11: Real Estate for Legal Assistance 3
- LA 12: Wills/Trusts/Probate 3
- Total Units: 36

**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
- Total Units: 15

**MARKETING—SALES TECHNOLOGY Certificate Program**

Eighteen units required for the certificate

- Bus 2: Introduction to Business 3
- Bus 4: Principles of Marketing 3
- Bus 14: Practical Salesmanship 3
- Bus 1A: Principles of Accounting 4
- Bus 10A: Practical Bookkeeping 3
- Bus 21AB: Proficiency—Exit Typewriting 2-2
- Bus 23: Office Machines 3

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CERTIFICATE PROGRAMS

Bus 65  Retail Sales Checking  2
Econ 1  Principles of Economics  3
Total Units  18

REAL ESTATE Certificate Program

Upon the satisfactory completion of the following courses, the student will be eligible for the California Junior College Real Estate Certificate which is issued in cooperation with the California Division of Real Estate and the California Real Estate Association under their Education and Research Program.

Bus 90  Real Estate Principles  3
Bus 91  Real Estate Practices  3
Bus 92A  Legal Aspects of Real Estate  3
Bus 92B  Real Estate Finance  3
Bus 94A  Real Estate Appraisal  3
Bus 94B  Real Estate Economics  3
Bus 95  

Total Units  24

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
PE 14  Recreational Games  1

Two units selected from the following courses

Art 31  Crafts  3
PE 59AB  Sports Officiating, Men  3-3
PE 60AB  Sports Officiating, Women  3-3
PE 61  Physical Education in the Elementary School  3
PE 62AB  Physical Education for Special Olympics  3
Rec 71  Social Recreation  3

Two units selected from the following courses

PE 2ABCD  Gymnastics, Coed  1-1-1-1
PE 4ABCD  Badminton, Coed  1-1-1-1
PE 5ABCD  Swimming, Coed  1-1-1-1
PE 6  Lifesaving  2
PE 12ABCD  Tennis, Coed  1-1-1-1
PE 17ABCD  Physical Fitness, Men  1-1-1-1
PE 18ABCD  Gold, Coed  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
Total Units  18

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 Students  3
PL 2A  Practicum Experience to Work with the Physically Limited Person  2
Psych 1A OR Psych 5  General Psychology  3
Psych 5  Psychology of Effective Behavior  3
Eng 51 OR Eng 1A  The Communication Process  3

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  Audiology and Hearing Conservation  3

Option D

HA 15A OR  Hospital Nursing Assistant
HA 15B OR  Community Health Aide
HA 15C  Developmental Disability/Mental Retardation Aide  9

II. Acceptable courses for the certificate

PE 62AB  Physical Education for Special Olympics  3-3
PL 2B  Practicum Experience to Work with the Physically Limited Person  2
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/Developmental Psychology of Psych 20  Children  3
TA 24/ECE 24/ Creative Learning Experiences  3
Psych 24  for Young Children  3

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## VOCATIONAL NURSING

**Certificate Program**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psych 5</td>
<td>Psychology of Effective Behavior</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>(or Psych 1A, if eligible)</td>
<td></td>
</tr>
<tr>
<td>VN 50</td>
<td>Medical-Surgical Nursing I</td>
<td>7</td>
</tr>
<tr>
<td>VN 51</td>
<td>Clinical Fundamentals</td>
<td>7</td>
</tr>
<tr>
<td>VN 52</td>
<td>Medical-Surgical Nursing II</td>
<td>5</td>
</tr>
<tr>
<td>VN 53</td>
<td>Maternal-Child Health Nursing</td>
<td>5</td>
</tr>
<tr>
<td>VN 54</td>
<td>Clinical Fundamentals</td>
<td>7</td>
</tr>
<tr>
<td>VN 55</td>
<td>Medical-Surgical Nursing III</td>
<td>10</td>
</tr>
<tr>
<td>VN 56</td>
<td>Clinical Fundamentals</td>
<td>7</td>
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Total Units: 51

## WATER TREATMENT TECHNOLOGY

**Certificate Program**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>WT 1</td>
<td>Water Treatment Plant Operator I</td>
<td>4</td>
</tr>
<tr>
<td>WT 2</td>
<td>Water Treatment Plant Operator II</td>
<td>4</td>
</tr>
<tr>
<td>WT 3</td>
<td>Waste Water Treatment I</td>
<td>4</td>
</tr>
<tr>
<td>WT 4</td>
<td>Waste Water Treatment II</td>
<td>4</td>
</tr>
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Total Units: 25

## WELDING

**Certificate Program**

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<td>Oxy-Acetylene Welding</td>
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Six units to be selected from the following courses:

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<td>Ag 35</td>
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<td>Ag 36</td>
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<td>Electricity on the Farm</td>
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Total Units: 21

## OCCUPATIONAL WORK EXPERIENCE

**Certificate Program**

Twenty-eight units required

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<td>Personal Efficiency</td>
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<td>WE Occ 81</td>
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<tr>
<td>WE Occ 82</td>
<td>Labor and the Economy</td>
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<td>WE Occ 83</td>
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Twelve units from the student's planned course of occupational training as approved by the Dean of Vocational-Technical Education.

Total Units: 28
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