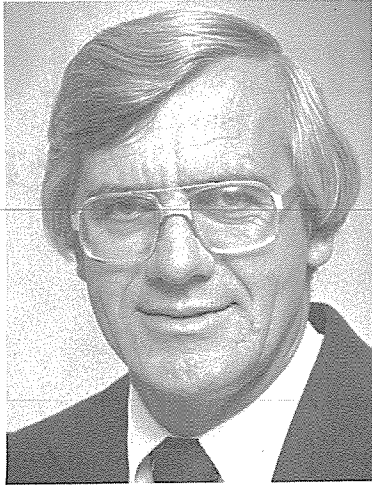


# College of San Mateo

Catalog 1980-1981

A community college  
Accredited by the Western Association  
of Schools and Colleges

1700 West Hillsdale Boulevard—San Mateo, California 94402—(415) 574-6161



The College of San Mateo faces the decade of the 80's with a renewed commitment to excellence in education. To meet the goal, a determined effort is being made to provide each and every student with a choice of selected programs designed to withstand the challenges of the modern world in which we live. This includes superior preparation for a working career upon graduation or transfer to a four-year institution.

Day to day life as a student at the College can be filled with a variety of activities: academic and extracurricular. The College offers a wide ranging opportunity for involvement in keeping with the desires of the student of the 80's to experience a full and complete learning experience.

The faculty of master teachers is highly qualified to motivate, instruct, and counsel the students. Their dedication and success is mirrored in the achievements of the many former students who have migrated into productive roles in the labor force or who have transferred and successfully completed undergraduate and graduate programs at leading colleges and universities.

James G. Rudolph, President  
Board of Trustees  
San Mateo County Community  
College District



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Graphic designer: Greg Jones  
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### Accuracy Statement

The College of San Mateo and the San Mateo County Community College District have made every reasonable effort to determine that everything stated in this catalog is accurate. Courses and programs offered, together with other information contained herein, are subject to change without notice by the administration of the College of San Mateo for reasons related to student enrollment, level of financial support, or for any other reason, at the discretion of the College. The College and the District further reserve the right to add, amend or repeal any of their rules, regulations, policies and procedures, consistent with applicable laws.

## Calendar for 1980-1981

### Summer Intersession 1980

#### Test Dates

See "Application for Admission" for dates, times and places

#### Registration

See Schedule of Classes

#### Classes Begin

June 23

#### Independence Day Holiday

July 4

#### Last Day to Petition for Summer AA/AS Degree

July 28

#### Summer Intersession Six-week Classes Close

July 31

#### Summer Intersession Eight-week Classes Close

August 14

### Fall Semester 1980

#### Applications Available

April 16

#### Test Dates for Fall Semester 1980

See "Application for Admission" for dates, times, and places

#### Counseling-Registration by Appointment, New and Returning Students

August 19-27

#### Day and Evening Classes Begin

September 3

#### Last Day to Add Semester-length Classes

September 16

#### Last Day to Drop Classes without Appearing on Student Record

September 19

#### Veterans' Day Holiday

November 11

#### Last Day to Apply for Fall AA/AS Degree or Certificate

November 7

#### Last Day to Drop a Semester-length Class in which a Student is Failing without Possible "F" Grade

November 14

#### Thanksgiving Recess

November 27-29

#### Registration for Continuing Students

December 9-19

#### Winter Recess

December 22-January 3

#### Final Examinations, Evening Classes

January 14-20

#### Final Examinations, Day Classes

January 14-21

#### Inter-Semester Recess

January 26

### Spring Semester 1981

#### Applications Available

November 10

#### Test Dates for Spring Semester

See "Application for Admission" for dates, times and places.

#### Counseling-Registration by Appointment, New and Returning Students

January 14-21

#### Day and Evening Classes Begin

February 2

#### Last Day to Add Semester-length New Classes

February 17

#### Declared Recess

February 14

#### Lincoln Day Holiday

February 13

#### Washington Day Holiday

February 16

#### Last Day to Drop Classes without Appearing on Student Record

February 20

#### Spring Recess

April 13-18

#### Last Day to Apply for AA/AS Degree or Certificate

April 10

#### Last Day to Drop a Semester-length Class in which a Student is Failing without Possible "F" Grade

April 10

#### Test Dates for Fall Semester 1981

See "Application for Admission" for dates, times and places.

#### Registration for Continuing Students

May 18-22

#### Memorial Day Holiday

May 25

#### Final Exams—Day Classes

June 5-12

#### Final Exam—Evening Classes

June 6-11

#### Commencement

June 11

### Summer Intersession 1981

#### Test Dates

See "Application for Admission" for dates, times and places.

#### Registration

See Schedule of Classes

#### Classes Begin

June 22

#### Independence Day Holiday

July 3 & 4

#### Last Day to Petition for Summer AA/AS Degree

July 17

#### Summer Intersession Six-week Classes Close

July 31

#### Summer Intersession Eight-week Classes Close

August 14

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## Board of Trustees San Mateo County Community College District

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*College of San Mateo is part of the San Mateo County Community College District, which also operates Cañada College in Redwood City and Skyline College in San Bruno. The District and its Colleges are governed by a five-member Board of Trustees elected at large for four-year terms by county voters.*

*James G. Rudolph, President*

*James R. Tormey, Jr., Clerk*

*William E. Jordan*

*Eleanore D. Nettle*

*Robert A. Tarver*

*Glenn P. Smith  
District Chancellor-Superintendent*

*W. D.  
Dire  
Joe C.  
Directe*

## College of San Mateo Administration

**Lois A. Callahan**  
President

**Gertrude M. Steele**  
Administrative Assistant to the President

### INSTRUCTIONAL SERVICES

**Gilbert B. Gossett**  
Dean of Instruction

**(Vacant)**  
Director of Career and  
Occupational Education

**Michael B. Kimball**  
Director of Extended Educational  
Programs

**Stewart Cheifet**  
Director of Educational  
Broadcasting and Services

### ACADEMIC DIRECTORS

**Leo N. Bardes**  
Director, Fine and Performing Arts

**Michael J. Clemens**  
Director, Social Science

**Clifford G. Giffin**  
Director, Physical Education/Athletics

**George E. Wallace**  
Director, Mathematics and  
Science

**Cecilia A. Hopkins**  
Director, Business

**H. Sanford Gum**  
Director, Technology (Acting)

**W. G. Pinney**  
Director, Language Arts

**M. Hagerty**  
Director, Health and Service Careers (Acting)

### STUDENT SERVICES

**Allan R. Brown**  
Dean of Student Services

**Philip D. Morse**  
Director of Special Programs  
and Services

**Herbert R. Warne**  
Director of Admissions  
and Records

**Aline Fountain**  
Director of Counseling Services

**Jackman L. LeBlanc**  
Director of College  
Readiness Program/EOPS Multicultural Center

### OPERATIONS

**Lynn Pontacq**  
Director of Operations

**Chester R. Williams**  
Supervisor of Buildings and Grounds

# College Faculty 1980-1981

(Date of original appointment follows name.)

- Acena, Albert A.** (1966)  
History  
B.A., Seattle University  
M.A., Ph.D., University of Washington
- Alexandre, Alvin A.** (1961)  
English, Journalism,  
B.A., M.A., New York University
- Allende, David H.** (1967)  
Art, Counselor  
B.A., M.A., University of Tulsa
- Anderson, Robert D.** (1959)  
Physics  
A.B., University of Calif., Berkeley  
M.S., Purdue University
- Andrews, Edgar H.** (1958)  
History  
A.B., M.A., University of Calif., Berkeley
- Anenson, Marian R.** (1964)  
Nursing  
B.S., R.N., University of Minnesota
- Angerbauer, George** (1963)  
Electronics Technology, Counselor
- Angier, W. Jeanne** (1965)  
English  
B.A., M.A., Washington University, St. Louis
- Appleton, Alanson** (1961)  
Art  
A.B., California College of Arts and Crafts  
M.A., University of Calif., Berkeley
- Arnold, Marlene C.** (1965)  
Nursing  
B.S., R.N., College of St. Scholastica  
M.S., University of Calif., San Francisco
- Atkins, Gregg T.** (1975)  
Librarian  
A.A., College of San Mateo  
B.A., M.L.S., University of California, Berkeley
- Baker, Mary J.** (1967)  
Biology, Counselor  
B.A., University of Calif., Berkeley  
M.A., San Francisco State University
- Bardes, Leo N.** (1965)  
Director, Fine Arts Division  
B.A., M.A., San Francisco State University
- Beale, Paul L.** (1963)  
Business  
B.S., M.B.A., Stanford University
- Beaty, Donald E.** (1967)  
Physics  
B.A., M.A., Whittier College  
M.A., Colorado College
- Bell, James K.** (1963)  
English  
B.A., University of Calif., Santa Barbara  
M.A., University of Calif., Berkeley
- Berensmeier, Barbara Jean** (1956)  
Physical Education  
A.B., San Francisco State University
- Berglund, John J.** (1965)  
Aeronautics  
B.V.E., M.A., San Francisco State University
- Bernasque, Jean A.** (1973)  
Dental Assisting  
A.A., College of San Mateo
- Berry, Daniel A.** (1958)  
Business Administration, Counselor  
B.S., Armstrong College  
A.B., M.A., University of Calif., Berkeley
- Berry, Fredrick J.** (1968)  
Music  
B.M., M.M., Southern Illinois University
- Beuttler, Rose Marie P.** (1965)  
French, Women's Re-entry Program  
B.A., University of Calif., Berkeley  
A.M., Stanford University
- Billeter, William J.** (1961)  
Business Administration, Data Processing  
B.S., Golden Gate University  
M.A., San Francisco State University  
Ed.D., Nova University
- Blitz, George A.** (1974)  
Botany  
B.S., A.B., M.A., University of Calif., Berkeley
- Blust, Dale W.** (1965)  
Aeronautics, Counselor  
A.A., College of San Mateo
- Blust, Kenneth E.** (1966)  
Aeronautics  
A.A., Everett Junior College, Wash.
- Bogan, Harold S.** (1974)  
Security  
A.A., College of San Mateo
- Bramlett, George E.** (1969)  
Electronics Technology  
B.A., Calif. State Univ., Fresno  
M.A., San Jose State University
- Brown, Allan R.** (1959)  
Dean of Student Services  
A.B., A.M., Stanford University  
Ph.D., Stanford University
- Brown, Kathryn** (1977)  
Learning Skills  
A.A., College of San Mateo  
B.A., San Francisco State University  
M.S., San Diego State University

8 College Faculty (continued)

**Brusin, Michael J.** (1964)  
History, Economics  
B.A., M.A., San Jose State  
University

**Bucher, Michael C.** (1969)  
Biology  
B.A., M.A., University of  
California, Los Angeles

**Burdash, Elizabeth A.** (1965)  
Psychology  
B.A., Boston University  
M.S., Mass. Institute of Technology

**Burke, Michael C.** (1976)  
Mathematics  
B.A., University of California,  
Santa Barbara  
M.A., Stanford University  
M.A., University of Oregon

**Burton, Kathleen M.** (1968)  
Business  
B.S., University of Wyoming  
M.A., San Jose State University

**Burton, Virginia** (1950)  
Physical Education  
A.B., MacMurray College  
A.M., Teachers College, Columbia  
University

**Cafferata, John** (1968)  
English  
B.A., M.A., San Francisco State  
University

**Callahan, Lois A.** (1967)  
President  
B.S., Southwest Missouri State  
University  
M.A., California State University,  
Chico  
Ed.D., University of Southern  
California

**Cameron, D. Bruce** (1968)  
English  
A.A., Santa Rosa Junior College  
B.A., Hunter College  
M.A., Columbia University

**Camps, Albert** (1967)  
Electronics Technology  
A.A., City College of San Francisco

**Carter, Stuart R.** (1964)  
Physical Education  
A.B., M.A., San Jose State  
University

**Casstevens, Jewell** (1963)  
Cosmetology  
A.A., College of San Mateo

**Castillo, Richard P.** (1969)  
Spanish  
B.A., University of Calif., Berkeley  
M.A., Middlebury College,  
Vermont

**Cate, Donald F.** (1964)  
Political Science  
B.A., Pacific University  
M.A., Oregon State University  
Ph.D., Stanford University

**Chaw, Gladys** (1973)  
Librarian  
A.A., City College of San Francisco  
B.A., Calif. State University,  
Sacramento  
M.L.S., University of California,  
Berkeley

**Cheifet, Stewart D.** (1978)  
Director of Educational  
Broadcasting  
A.B., University of Southern  
California  
J.D., Harvard University

**Chowenhill, Dean F.** (1967)  
Drafting Technology, Counselor  
A.A., Los Angeles Harbor College  
B.A., M.A., San Jose State  
University

**Chriss, Michael** (1966)  
Astronomy, Counselor  
B.S., M.S., University of Arizona

**Chroman, Peter** (1969)  
Sociology, Anthropology  
A.B., University of Illinois  
M.A., San Francisco State  
University

**Clemens, Michael J.** (1967)  
Director, Social Science Division  
A.B., M.A., Columbia University

**Clemens, Roger W. C.** (1957)  
Life Science  
B.S., M.S., University of Calif.,  
Berkeley

**Clinkscales, J. Kyle** (1957)  
Chemistry, Counselor  
B.S., University of Calif., Berkeley  
M.S., University of Pacific  
M.A., San Jose State University  
(Education, Counseling)

**Cohn, Adrian A.** (1963)  
English  
B.S., M.S., Ph.D., University of  
Wisconsin

**Cons, Jean M.** (1976)  
Anatomy, Physiology  
A.A., Oakland Community College  
B.A., San Francisco State  
University  
M.A., Ph.D., University of  
California, San Francisco

**Cooke, Stuart T.** (1964)  
History  
A.B., Lafayette College  
M.A., University of Pennsylvania

**Cooper, Barton C.** (1965)  
Philosophy  
B.A., Ph.D., University of Calif.,  
Berkeley

**Cordes, Henry M.** (1964)  
German  
B.A., M.A., State University of  
New York, Buffalo  
Ph.D., Stanford University

**Coulson, Robert N.** (1965)  
Machine Tool Technology  
A.B., M.A., San Francisco State  
University

**Coyne, Robert J.** (1963)  
Art, Photography  
B.A., M.A., San Francisco State  
University

**Crawford, Douglas B.** (1960)  
Mathematics, Counselor  
A.B., A.M., Stanford University

**Crawford, Zelte** (1969)  
Ethnic Studies  
B.S., M.A., Western Michigan  
University  
Ph.D., Stanford University

**Crest, Richard L.** (1958)  
Music  
B.A., San Jose State University

- Cron, John A.** (1968)  
Business  
A.B., M.A., San Francisco State University
- Crouch, Dorothy J.** (1968)  
Biology  
A.B., University of Calif., Berkeley  
M.A., Ph.D., Stanford University
- Curren, Terence B.** (1962)  
Zoology, Physical Anthropology  
B.A., University of Calif., Berkeley  
M.A., San Francisco State University
- Davis, Gregory** (1966)  
Political Science  
A.B., A.M., Stanford University
- De Freitas, Louis** (1966)  
Welding Technology  
B.V.E., M.A., San Francisco State University
- De Gregorio, Michael L.** (1957)  
Chemistry, Physics  
A.B., A.M., San Francisco State University
- Dehnel, George S.** (1962)  
Biology, Botany  
B.A., San Diego State University  
Ph.D., University of Calif., Berkeley
- Denison, Frank G.** (1964)  
Mathematics  
S.B., Mass. Institute of Technology  
M.S., A.E., California Institute of Technology
- Denney, Clifford O.** (1975)  
Chemistry  
B.S., Portland State University  
M.Ed., M.S., Ph.D., Oregon State University
- Devonshire, Charles M.** (1958)  
Psychology  
B.S., M.A., University of Texas
- Dickey, William J.** (1975)  
Physical Education, Football Coach  
B.S., Utah State
- Dittes, Marilyn D.** (1974)  
Nursing  
B.S., San Francisco State University
- Donner, Richard C.** (1963)  
Physical Education  
B.A., M.A., San Jose State University
- Duncan, David L.** (1974)  
Technical Art/Graphics  
A.A., College of San Mateo  
B.A., M.A., San Jose State University
- Edmundson, James S.** (1964)  
French  
B.A., University of Washington  
B.S., Georgetown University  
M.A., University of Washington  
Ph.D., Columbia University
- Fark, Roland H.** (1969)  
Marine Biology, Ecology,  
Counselor  
B.S., M.A., Bowling Green State University
- Faure, Emile L.** (1970)  
Mathematics  
B.A., San Diego State University  
M.A., Claremont Graduate School
- Fellows, Ward J.** (1966)  
Philosophy  
A.B., Cornell University  
B.D., S.T.M., Union Theological Seminary  
M.A., University of California, Berkeley
- Fisher, Anita** (1969)  
Psychology  
B.A., University of Southern Calif.  
Ph.D., Stanford University
- Fitzgerald, Maurice J.** (1964)  
English  
B.S., University of San Francisco  
A.M., Stanford University  
Ed.D., University of Southern California
- Fountain, Aline** (1965)  
Director of Counseling Services  
B.S., Florida State University  
M.A., San Francisco State University (Education)  
M.A., San Francisco State University (Counseling and Psychology)
- Foye, James F.** (1971)  
Aeronautics  
A.A., Sacramento City College  
B.V.E., San Francisco State University
- Fraker, Wilson P.** (1968)  
Business  
A.B., Harvard  
M.B.A., University of California, Berkeley
- Frassetti, Gerald J.** (1967)  
English, Foreign Student Advisor  
B.A., St. Mary's College  
M.A., San Francisco State University
- Galindo, Donald V.** (1956)  
Art  
A.B., University of Calif., Berkeley  
B.A.E., M.F.A., California College of Arts and Crafts
- Gattmann, Eric** (1964)  
Education, Counselor  
A.B., University of Calif., Berkeley  
M.A., San Francisco State University
- George, Thomas W.** (1966)  
Business  
B.A., M.A., Texas Technological College  
Ph.D., University of Washington
- Gibson, Ellen Ross** (1970)  
Photography, Art  
B.F.A., Virginia Commonwealth University  
M.A., San Francisco State University
- Giffin, Cliff G.** (1958)  
Director, Physical Education/  
Athletics Division  
B.S., M.S., University of Oregon
- Gill, John M.** (1969)  
English  
B.A., M.A., University of Washington  
Ph.D., New York University
- Glen, William** (1957)  
Geology, Paleontology, Counselor  
B.S., Brooklyn College  
M.A., University of Calif., Berkeley  
Ph.D., Union Graduate School

10 College Faculty (continued)

**Goebler, John H.** (1970)  
Political Science  
A.A., College of San Mateo  
B.A., M.A., San Francisco State  
University

**Gossett, Gilbert B.** (1955)  
Dean of Instruction  
B.A., M.A., University of Pacific

**Goth, George W.** (1975)  
Chemistry  
B.A., Columbia College  
Ph.D., University of Calif.,  
Berkeley

**Graham, Alexander** (1966)  
Horticulture  
Scottish Diploma Horticulture,  
West Scotland, College of  
Agriculture  
Diploma Horticulture, Royal  
Botanic Garden, Edinburgh,  
Scotland  
Natural Diploma Horticulture,  
Royal Horticulture Society

**Griffin, Irene F.** (1964)  
Drama  
A.B., Barnard College  
A.M., Stanford University

**Gum, H. Sanford** (1963)  
Director, Math/Science Division  
(Acting)  
B.A., San Jose State University  
A.M., Stanford University  
Ed.D., Oregon State University

**Gustavson, Charles F.** (1966)  
Music  
A.B., M.A., San Francisco State  
University

**Hagerty, Joe C.** (1977)  
Director, Health & Service Careers  
Division (Acting)  
A.S., R.N., Henry Ford Community  
College  
B.A., Wayne State University  
B.S., M.S., University of California  
Medical Center, San Francisco

**Halualani, Jennie** (1963)  
Nursing  
R.N., St. Francis Hospital School  
of Nursing, Hawaii  
B.S.N.E., St. Mary's College,  
Kansas  
M.S., University of California,  
San Francisco

**Hancock, John C.** (1965)  
Music  
A.B., San Francisco State  
University  
M.A., San Jose State University

**Hanigan, Jane E.** (1958)  
English, Women's Re-entry  
Program  
A.B., University of Calif., Berkeley  
M.A., San Francisco State  
University

**Harriman, William** (1963)  
English  
B.A., M.A., J.D., University of  
California, Berkeley

**Harrington, Joyce M.** (1969)  
Nursing  
R.N., Providence School of  
Nursing  
B.S.N.E., Seattle University  
M.S., University of California,  
San Francisco

**Harris, Edward M.** (1968)  
Mathematics  
B.S., University of Colorado  
M.A., San Francisco State  
University

**Harris, Richard V.** (1965)  
Physical Education  
A.B., M.A., Humboldt State  
College

**Harrison, Kenneth W.** (1969)  
Music  
B.M., University of Southern Calif.  
M.A., San Francisco State  
University

**Hazelton, Louise B.** (1960)  
History, English  
B.A., University of California,  
Los Angeles  
M.A., Calif. State Univ., Fresno

**Heitz, Carol Rhodabarger** (1964)  
Guidance, Counselor  
A.B., University of California,  
Santa Barbara  
M.A., San Francisco State  
University

**Henderson, Frances C.** (1967)  
Nursing  
B.S., R.N., Dillard University  
M.S., University of California,  
San Francisco  
Ed.D., Nova University

**Herman, Mary M.** (1978)  
Speech Pathologist  
B.A., M.A., San Francisco State  
University

**Heyeck, Robin R.** (1965)  
English  
A.B., A.M., Stanford University

**Hills, Dorothy** (1968)  
Early Childhood Education  
B.S., University of Oregon  
M.A., San Francisco State  
University

**Holmes, Paul C.** (1964)  
English  
B.A., University of Calif., Berkeley  
M.A., San Francisco State  
University

**Holmgren, Roy H.** (1957)  
Mathematics  
A.B., M.A., University of Calif.,  
Berkeley

**Hopkins, Cecilia Ann** (1958)  
Director, Business Division  
B.S., Montana State College  
M.A., San Francisco State  
University (Business Education)  
M.A., San Francisco State  
University (Counseling and  
Administration)  
Ph.D., Calif. Western University

**Howe, Robert S.** (1965)  
Guidance, Counselor  
A.B., San Jose State University  
A.M., Stanford University

**Hynding, Alan A.** (1967)  
History  
B.S., University of Oregon  
M.A., Stanford University  
Ph.D., University of Washington

**Ingraham, Joeann** (1962)  
Physical Education  
A.B., San Jose State University



**Innis, James E.** (1967)  
Health Science  
A.B., M.A., University of Northern  
Colorado

**Ireson, Mamie G.** (1963)  
Consumer Arts & Sciences,  
Counselor  
B.S., Mary Washington State  
University  
M.S., Virginia Polytechnic  
Institute-State University

**Jackson, James L.** (1959)  
Mathematics  
B.A., Beloit College  
M.A., University of California,  
Berkeley

**Jacques, James J.** (1969)  
Physical Education  
B.A., M.A., San Jose State  
University

**Jaffy, Florence I.** (1958)  
Economics  
A.B., Pennsylvania State College  
M.A., University of Chicago

**Janssen, William A.** (1965)  
Business  
A.B., M.A., San Jose State  
University

**Jeffers, Mary L.** (1963)  
Political Science  
A.B., M.A., Tennessee State Univ.

**Jorgenson, Wallace H.** (1969)  
Aeronautics  
B.V.E., San Francisco State  
University

**Joslin, Rex J.** (1964)  
Biology  
B.S., Wisconsin State College  
M.S., University of Illinois

**Karl, John E., Jr.** (1962)  
Anatomy, Physiology  
B.A., Allegheny College  
M.S., University of Kentucky  
Ph.D., Louisiana State University

**Kaufmann, Walter M.** (1966)  
Sociology, Psychology  
B.A., University of Calif., Berkeley  
M.A., San Francisco State  
University  
J.D., University of Calif., Berkeley

**Kellejian, Robert** (1962)  
Electronics Technology  
A.B., M.A., San Francisco State  
University

**Keller, Robert M.** (1958)  
Chemistry  
A.B., M.A., San Jose State  
University

**Kennedy, Vance A.** (1976)  
Business  
A.A., San Jose City College  
B.S., M.B.A., San Jose State  
University

**Kennelly, Maureen E.** (1970)  
Nursing  
R.N., Poplar Hospital, London  
B.S.N., DePaul University  
M.P.H. University of Michigan

**Keys, Noel W.** (1966)  
Psychology, Psychological Services  
B.S., Denison University  
M.A., Duke University  
Ph.D., University of North  
Carolina

**Kimball, Michael B.** (1968)  
Director, Extended Educational  
Programs  
B.A., Stanford University  
M.A., San Francisco State  
University

**Kirk, John R.** (1970)  
Economics  
B.A., University of California,  
Berkeley  
M.A., San Jose State University

**Landmann, Eva M.** (1975)  
Nursing  
R.N., Central Middlesex Hospital,  
London  
B.S.N., University of Alberta  
M.S.N., San Jose State University

**Lapp, Rudolph M.** (1955)  
History  
A.B., Roosevelt University  
M.A., Ph.D., University of Calif.,  
Berkeley

**Leach, Walter J., Jr.** (1956)  
Psychology, Sociology  
B.A., University of California,  
Los Angeles  
M.A., University of California,  
Santa Barbara

**Le Blanc, Jackman L.** (1974)  
Director, College Readiness  
Program  
B.A., United States International  
University  
M.Ed., University of California,  
Santa Barbara

**Lee, Priscilla T.** (1967)  
Anthropology  
A.B., A.M., Ph.D., Stanford  
University

**Lehman, Anita J.** (1963)  
English  
B.A., M.A., University of Calif.,  
Los Angeles

**Leroi, Frank B.** (1968)  
Economics  
B.A., University of California,  
Los Angeles  
M.A., San Jose State University

**Linder, Doris H.** (1967)  
History  
B.A., M.A., Stanford University  
Ph.D., University of Minnesota

**Lokken, Arlys K.** (1963)  
Nursing  
R.N., University of North Dakota  
School of Nursing  
B.S., University of North Dakota  
M.S., University of California,  
San Francisco

**Lorenzato, Raymond** (1965)  
Art  
B.A., Humboldt State University  
M.F.A., Calif. College of Arts and  
Crafts

**MacDonald, Lorne** (1968)  
Electronics Technology  
B.S., Pacific State University

**Mahood, Marcia** (1960)  
Business, Counselor  
B.A., M.A., Michigan State  
University  
M.S., Calif. State Univ., Hayward

12 College Faculty (continued)

**Mantabe, Musonda D.** (1969)  
History, Counselor  
B.A., Syracuse University  
M.A., Lone Mountain College

**Marks, Jacqueline** (1979)  
Business Administration  
A.A., Pensacola Junior College  
B.A., Pacific College  
M.B.A., Golden Gate University

**Marshall, R. Galen** (1964)  
Music, Counselor  
A.B., M.A., San Francisco State  
University

**Martinez, Thomas A.** (1976)  
Physical Education/Athletics  
B.A., San Francisco State  
University  
M.A., Azusa Pacific College,  
California

**McClure, Clois A.** (1963)  
Technical Drafting, Counselor  
A.B., Calif. State Univ., Fresno  
M.A., San Francisco State  
University  
Ed.D., Utah State University

**McCue, Mary J.** (1955)  
English  
B.A., Marygrove College  
M.A., University of Michigan

**McDonough, Joseph M.** (1966)  
Psychology  
A.B., Princeton University  
M.S., University of Miami  
Ph.D., Michigan State University

**McMillin, Virginia A.** (1963)  
Nursing  
R.N., St. Elizabeth's Hospital, Ohio  
B.S., M.S., University of Dayton,  
Ohio

**Mellor, Sandra L.** (1974)  
Business  
B.A., M.A., San Jose State  
University

**Mendenhall, Valdemer A.**, (1967)  
Aeronautics  
A.A., College of San Mateo

**Michael, Robert E.** (1965)  
Business Administration  
B.S., M.S., San Jose State  
University  
B.F.T., American Institute for  
Foreign Trade

**Miller, William H.** (1961)  
History  
A.B., College of Wooster  
M.A., Ph.D., University of Calif.,  
Berkeley

**Monroe, Howard C.** (1961)  
Ecology, Marine Biology  
B.S., University of Toledo  
M.A., University of Calif.,  
Los Angeles

**Montgomery, Douglas B.** (1963)  
Educational Broadcasting  
B.S., M.A., San Diego State  
University

**Morehouse, Steven N.** (1977)  
Coordinator of Veterans Affairs  
A.A., College of San Mateo  
B.A., San Francisco State  
University  
M.S., Calif. State Univ., Hayward

**Morse, Philip D.** (1940)  
Director, Special Services  
A.B., Occidental College  
M.A., University of California,  
Berkeley

**Mullen, Edward C.** (1955)  
English  
A.B., M.A., San Jose State  
University

**Multhaup, Ernest L.** (1964)  
Engineering, Counselor  
B.S., M.S., University of North  
Dakota

**Murashige, Kate H.** (1968)  
Chemistry  
B.A., Washington University  
Ph.D., University of Calif.,  
Los Angeles  
J.D., Univ. of Santa Clara

**Musgrave, Diane W.** (1970)  
German  
A.B., M.A., Stanford University

**Noce, John L.** (1961)  
Physical Education  
A.B., University of Pacific  
M.A., San Francisco State  
University

**Norman, Colette J.** (1974)  
Librarian  
B.A., Southern Univ., Baton Rouge  
M.A., San Jose State University

**Odum, Daniel C.** (1964)  
Telecommunications, Counselor  
A.B., San Diego State University

**Olson, Robert A.** (1956)  
Speech  
B.S., Wisconsin State College  
M.A., San Jose State University

**O'Mahony, Rosalie M.** (1965)  
Mathematics  
B.S., Loyola University  
M.S., University of Notre Dame  
Ph.D., Univ. of Southern Calif.

**Orozco, Adrian** (1969)  
Counselor  
S.T.B., St. Alexis College, Rome,  
Italy  
M.Ed., Loyola University, Chicago

**Owen, William H.** (1963)  
Machine Tool Technology  
A.B., M.A., San Francisco  
State University

**Owens, Peter H.** (1971)  
Chemistry  
B.S., Massachusetts Institute of  
Technology  
M.S., Oregon State University  
Ph.D., University of California,  
Berkeley

**Paoli, Patricia J.** (1979)  
Speech  
A.B., University of California,  
Berkeley  
M.A., California State University,  
Hayward

**Peña, June W.** (1969)  
Nursing  
Diploma, Good Samaritan School  
of Nursing  
A.B., San Francisco State  
University  
M.S., University of California,  
San Francisco

- Petit, Susan Y.** (1968)  
English  
B.A., Knox College  
M.A., Purdue University
- Petromilli, James** (1973)  
Electronics  
A.A., College of San Mateo  
B.A., M.A., San Francisco State University
- Pex, Betty C.** (1960)  
English  
Ph.B., A.M., University of Chicago
- Pflug, Raymond J.** (1956)  
English  
A.B., A.M., Stanford University
- Phipps, Richard S.** (1962)  
Political Science, Guidance,  
Counselor  
A.B., M.A., University of Calif.,  
Berkeley
- Pinney, Wilson G.** (1961)  
Director, Language Arts Division  
A.B., Trinity College  
Ed.M., Harvard University
- Piserchio, Rosemary** (1973)  
Business, Counselor  
B.A., M.A., San Francisco State University
- Polansky, Stephen H.** (1968)  
Political Science  
B.A., Princeton University  
J.D., Harvard Law School
- Porter, Donald T.** (1963)  
Philosophy  
B.S., M.A., University of Calif.,  
Berkeley
- Pounds, Robert D.** (1970)  
Physical Education  
B.S., University of California,  
Los Angeles
- Price, Dolores** (1967)  
Physical Education  
B.S., M.Ed., Oregon State University
- Price, Joe A.** (1970)  
Art  
B.S., Northwestern University  
M.A., Stanford University
- Prindle, Philip G.** (1958)  
Speech, Telecommunications  
B.A., Concordia College,  
Minnesota  
M.A., Washington State University  
Ph.D., Stanford University
- Pumphrey, Jean** (1967)  
English  
B.A., Denison University  
M.A., San Francisco State University
- Ramsey, Carolyn Ogletree** (1974)  
Guidance, Counselor  
B.A., M.S., San Francisco State University
- Rankin, Theodore L.** (1971)  
Administration of Justice  
B.S., University of Southern  
California  
M.P.A., Golden Gate University
- Rascon, Vincent P.** (1963)  
Art  
B.A., University of Texas  
M.F.A., Los Angeles County Art  
Institute
- Rategan, Edward H.** (1968)  
Data Processing  
B.A., J.D., Marquette University
- Rawlings, Betty R.** (1973)  
Cosmetology
- Richmond, Kern** (1955)  
Political Science, Counselor  
A.B., M.A., University of Calif.,  
Berkeley
- Roach, T. James** (1970)  
Sociology, Psychology  
B.A., M.A., San Francisco State University
- Rock, Jo Ann C.** (1964)  
Cooperative Education, Counselor  
B.S., Pacific University  
M.A., San Francisco State University
- Rohrbacher, Richard W.** (1968)  
Drama  
A.B., University of the Pacific  
M.A., Washington State University
- Rose, Jacquelyn** (1977)  
College Specialist  
A.A., College of San Mateo  
B.A., San Francisco State University
- Ross, Hugh** (1961)  
History  
B.A., M.A., University of Virginia  
Ph.D., Stanford University
- Rubler, Selma** (1964)  
Nursing  
R.N., Beth Israel Hospital  
B.S., M.S., University of Calif.,  
San Francisco
- Rundberg, William B.** (1967)  
Mathematics  
B.A., San Jose State University  
M.A., Bowdoin College
- Rush, Robert D.** (1969)  
Physical Education  
B.A., M.A., San Jose State University
- Sachen, George** (1967)  
Aeronautics  
B.V.E., B.A., San Francisco State University
- Sandler, Marie H.** (1974)  
Early Childhood Education  
B.S., M.S., Florida State University
- Sausjord, Rosa I.** (1963)  
Spanish  
M.A., Smith College  
Ph.D., State University of Iowa
- Savidge, David** (1955)  
English  
A.B., DePauw University  
M.A., University of California,  
Berkeley
- Saxton, Lloyd O.** (1955)  
Psychology  
A.B., University of Calif., Berkeley  
M.A., San Francisco State University  
Ph.D., University of Pacific
- Schoenky, Mary A.** (1963)  
Nursing  
R.N., College of Saint Scholastica  
B.S., University of Minnesota  
M.N., University of Washington

14 College Faculty (continued)

- Schoenstein, Edward G.** (1967)  
Technical Art/Graphics  
B.A., M.A., California State  
University, Chico  
I.D.S.A.
- Schwartz, Edwin A.** (1957)  
Psychology  
B.A., New York University  
M.A., New Mexico Highlands  
University
- Scott, Stanley R.** (1964)  
Technical Drafting  
B.S., Iowa State College  
M.A., San Jose State University
- Searle, John B.** (1973)  
Chemistry  
B.S., Ph.D., Bristol University
- Shapiro, Robert L.** (1963)  
Electronics Technology  
A.B., University of Michigan  
M.A., University of Calif.,  
Los Angeles  
Ed.D., Utah State University
- Silva, Caroline R.** (1962)  
Physical Education  
A.B., M.A., San Francisco State  
University
- Singh, Balbir** (1964)  
Mathematics  
B.S., St. John's College, Agra  
University, India  
A.M., Stanford University  
Ph.D., University of Southern  
California
- Smith, Robert W.** (1965)  
Mathematics, Engineering,  
Architecture  
B.C.E., Clarkson College of  
Technology  
M.E., University of Calif., Berkeley
- Smith, Win** (1973)  
Supervisor, Media Center  
B.A., M.A., University of Calif.,  
Los Angeles
- Sonner, Grace Y.** (1970)  
Home Economics  
B.A., San Jose University  
M.S., Texas Woman's University
- Speer, Lee W.** (1965)  
English  
B.S., University of Scranton  
M.A., San Francisco State  
University
- Stack, Dennis M.** (1968)  
Technical Drafting  
B.S., Calif. State Polytechnic  
College  
M.A., San Jose State University
- Statler, Richard G.** (1972)  
Physical Education, Health  
Education  
B.S., M.S., California State  
University, Hayward
- Steele, Gertrude M.** (1953)  
Assistant to the President  
A.A., College of San Mateo  
B.A., College of Notre Dame  
M.A., San Francisco State  
University
- Stewart, Lawrence W.** (1968)  
English  
B.A., University of Utah  
M.A., San Francisco State  
University
- Stock, Nancy J.** (1974)  
Cosmetology  
A.A., Santa Monica City College
- Stocker, Angela R.** (1964)  
Physical Education, Dance  
B.A., Miami University  
M.A., San Francisco State  
University
- Stringari, Lawrence T.** (1969)  
Psychological Services  
B.A., M.A., San Francisco State  
University
- Sullivan, Daniel J.** (1969)  
Business  
A.B., Xavier University  
M.A., DePaul University  
M.B.A., University of Santa Clara
- Tarleton, Leah** (1977)  
School Nurse  
B.S., University of Iowa
- Tippey, James** (1969)  
Music  
B.M., M.M., Indiana University
- Tracy, Allen** (1946)  
Chemistry  
B.A., San Jose State University
- Trouse, Ronald R.** (1963)  
English  
B.A., University of Calif., Berkeley  
M.A., San Francisco State  
University
- Trugman, Ronald F.** (1973)  
Telecommunications  
B.A., Calif. State Univ.,  
Long Beach  
M.S., M.S.Ed., Ph.D., University of  
Southern California
- Turner, John** (1968)  
English  
B.A., University of Calif., Berkeley
- Upshaw, Debbie** (1975)  
Counselor  
B.S., Central State University  
M.Ed., University of Cincinnati
- Wakeham, Duane A.** (1965)  
Art  
B.A., Michigan State University  
A.M., Stanford University
- Wallace, George E.** (1954)  
Director, Math/Science Division  
A.A., College of San Mateo  
B.S., A.M. Stanford University
- Walters, Bruce E.** (1966)  
Aeronautics  
B.S., Oklahoma State University
- Wang, Peter C.** (1975)  
Electronics  
B.S.E.E., Nat. Taiwan University  
M.S.E.E., University of Missouri  
Ph.D., University of Pennsylvania
- Warne, Herbert R.** (1955)  
Director of Admissions and  
Records  
A.B., M.A., University of  
Pacific
- Weaver, Barlow A.** (1968)  
Librarian  
B.A., University of Texas  
M.S., Columbia University

**Weintraub, Alan L.** (1962)  
Geography  
B.S., De Paul University, Ill.  
M.S., University of Chicago  
Ph.D., Michigan State University

**West, David** (1973)  
B.A., San Francisco State Univ.  
M.S.W., University of Calif.,  
Berkeley  
M.A., Ph.D., Stanford University

**Whifler, William A.** (1966)  
Architecture  
B.A., Stanford University  
A.I.A.

**Williams, John C.** (1963)  
Director, Health & Service  
Careers Division  
A.B., M.A., San Francisco State  
University

**Williams, Myrtle T.** (1960)  
Cosmetology

**Williamson, Richard A.** (1963)  
English, Film  
B.A., M.A., San Francisco State  
University

**Williamson, Stuart** (1965)  
Biology  
A.B., Harvard University  
M.A., San Francisco State  
University

**Willis, Janice M.** (1977)  
Business  
B.S., Pennsylvania State University  
M.A., San Francisco State  
University

**Witt, Irving M.** (1963)  
Sociology  
B.A., University of Calif., Berkeley  
M.A., University of Chicago  
Ph.D., University of Calif.,  
Berkeley

**Wittwer, Betty J.** (1965)  
Business, Counselor  
B.A., M.A., San Jose State  
University

**Witzel, Elizabeth L.** (1966)  
Dental Assisting  
A.A., City College of San Francisco  
B.A., San Francisco State  
University

**Woolery, Jeanne K.** (1970)  
Data Processing  
B.A., Abilene Christian College  
B.S.E., Abilene Christian College  
M.B.A., George Washington  
University

**Young, Frank H.** (1969)  
Mathematics  
A.B., M.A., San Francisco State  
University

**Yutzy, Jan C.** (1972)  
Astronomy, Physics  
B.S., Boston College  
M.A., University of Calif.,  
Berkeley

**Zempel, William H.** (1964)  
Meteorology, Physics  
B.A., San Jose State University  
M.N.S., Arizona State University

**Zimmerman, Paul C.** (1967)  
Architecture  
B.Arch., University of Calif.,  
Berkeley  
A.I.A.

**Zones, Christe P.** (1968)  
Geology  
A.B., University of Pennsylvania  
M.S., University of Nevada

## Emeriti

**Dr. Elizabeth G. Balderston**  
English, Dean of Women

**Dr. Francis M. Stanger**  
History

**Dr. Harry E. Redeker**  
Chemistry

**E. H. Bashor**  
History

**Edla R. Walter**  
Librarian

**Leonora Y. Brem**  
Health Education

**Martha E. Burrill**  
Coordinator of Admissions and  
Registration

**Gladys L. White**  
Business

**Harry T. Mercer**  
English

**Erford A. McAllister**  
Journalism

**Dorothy F. Herrington**  
French

**Roland K. Abercrombie**  
Business

**Dr. William L. Roach**  
Psychology

**Carol E. Boyd**  
Home Economics

**Dr. David G. Rempel**  
History, Political Science

**John G. Ames**  
Mathematics

**Marjorie L. Hoffman**  
Mathematics

**Francis M. Coe**  
Agriculture

**Maurine Marsh**  
Spanish

**Alice W. Danielson**  
Home Economics

**Ainslie Harris**  
English

**Mildred H. Stickney**  
Business

**Fredric Roehr**  
Music

**Dr. Stanley L. Sharp**  
German, English, Speech

**Ralph W. Likens**  
Data Processing

**Margaret Cornahrens**  
Business, Counselor

**Alan P. Tory**  
Social Science

**Mildred S. Justesen Corcoran**  
Political Science

**Woodson F. Hocker**  
Spanish

**Dell M. Fishback**  
Health Education, Counselor

**John P. Nystrom**  
Aeronautics, Counselor

**Dr. Claude M. Anderson**  
Astronomy

**Helen M. Foley**  
Coordinator, Community Programs

**Ruth H. Weston**  
Assistant Dean of Students

**Dr. Jacob H. Wiens**  
Director, College of the Air

**Fred J. Clark**  
Physics

**William R. DeHart**  
Technical Illustration

**William A. Goss**  
History, Counselor

**Anne M. Grubbs**  
Chairperson, Health Occupations  
Division

**James A. Ice**  
Chemistry

**Claire Langston**  
Dental Assisting, Counselor

**Zoia V. Petelin**  
Cosmetology

**Marjorie M. Wheeler**  
Early Childhood Education

**Marvin Alexander**  
Chairperson, Social Sciences  
Division

**Lorraine Bush**  
Cosmetology

**Amerigo T. Ciani**  
Librarian

**John Hecomovich**  
Telecommunications

**Dr. William J. Justice**  
Business Administration,  
Counselor

**Dr. Francis A. Smart**  
Business Administration

**Ruth R. Teel**  
English

**Dr. Karl Grossenbacher**  
Biology

**Clifford V. Horn**  
Business

**Margreta S. Husted**  
Chemistry

**Alexander J. Murphy**  
English, Counselor

**Edmond O. Shinn**  
Guidance, Testing, Counselor

**Dr. Rex J. Bartges**  
Biology

**Jeanne Blanchette**  
Nursing

**Harry F. Clinton**  
Business

**Yolande S. Hilpisch**  
College Nurse

**Marvin A. Kolber**  
Biology, Zoology

**Edward A. Kusich**  
Engineering, Mathematics

**Dr. John A. Montgomery**  
Business Administration

**Harry W. Prochaska**  
Art

**Elizabeth K. Rempel**  
Art

**Gilbert G. W. Steed**  
Art

**Alice P. Wilson**  
English

**John B. Bestall**  
Engineering

**Herbert W. Free**  
Real Estate

**Winifred P. Stetson**  
Business, Counselor

**Robert A. Brauns**  
Play Production

**John B. Dooley**  
Librarian

**Albert K. Fine**  
Technical Drafting

**Herbert H. Hudson**  
Physical Education, Counselor

**D. Richmond Le Gallais**  
Chemistry

**Chauncey J. Martin**  
Machine Tool, Welding  
Technology

**Jeanette J. Mathers**  
Speech, English

**Ellentine M. Mullaney**  
English

**Samuel S. Rolph**  
Play Production

**Russell M. Stoker**  
Psychology

**Bernard F. Woods**  
Business Administration

**John D. Walsh**  
Administration of Justice

**Raymonde M. Cadol**  
French

**Raymond I. Balsley**  
Physical Education

**Merrill C. Hansen**  
Speech

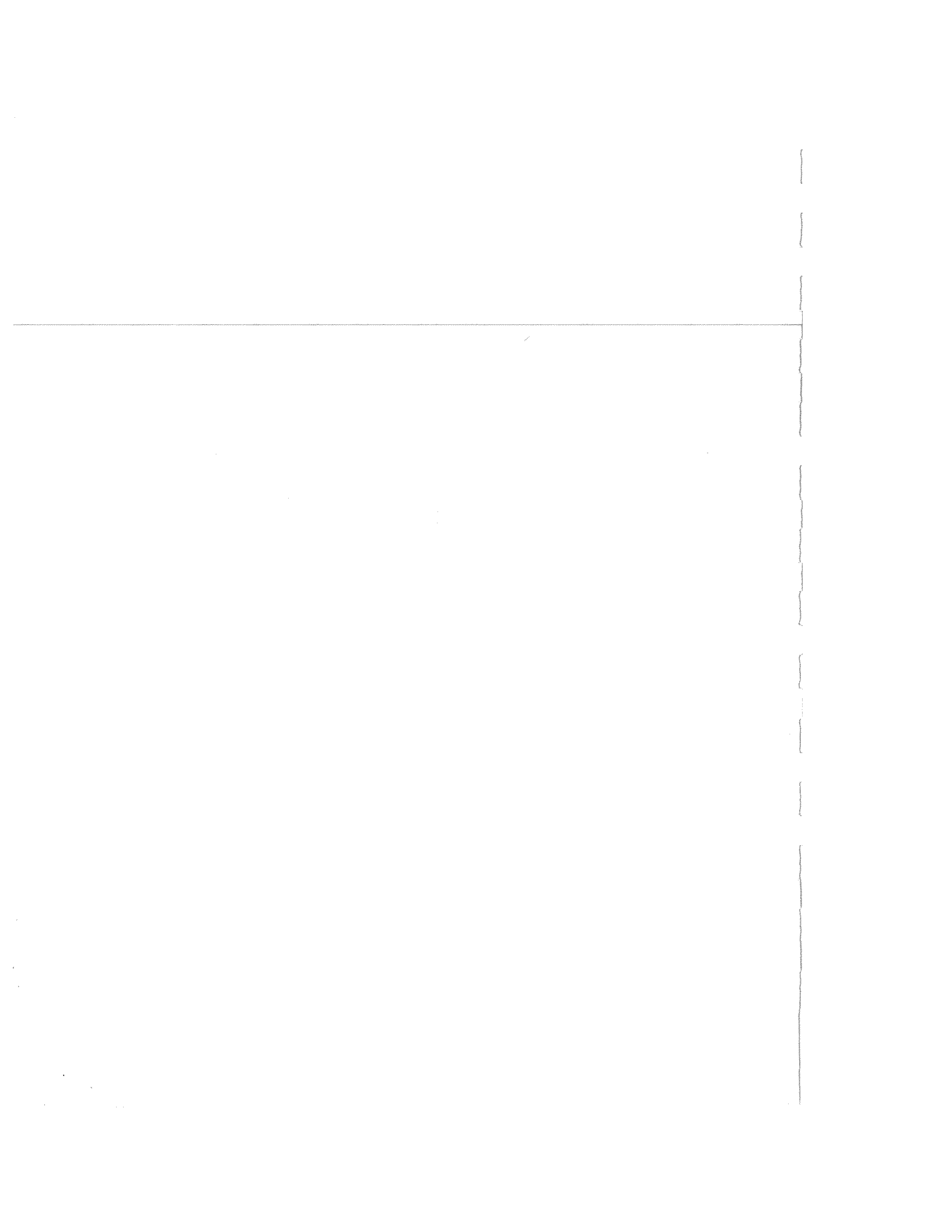
**Jack Daniels**  
Art, Counselor

**Ralph H. Bierce**  
English

**Francesca Brown**  
English

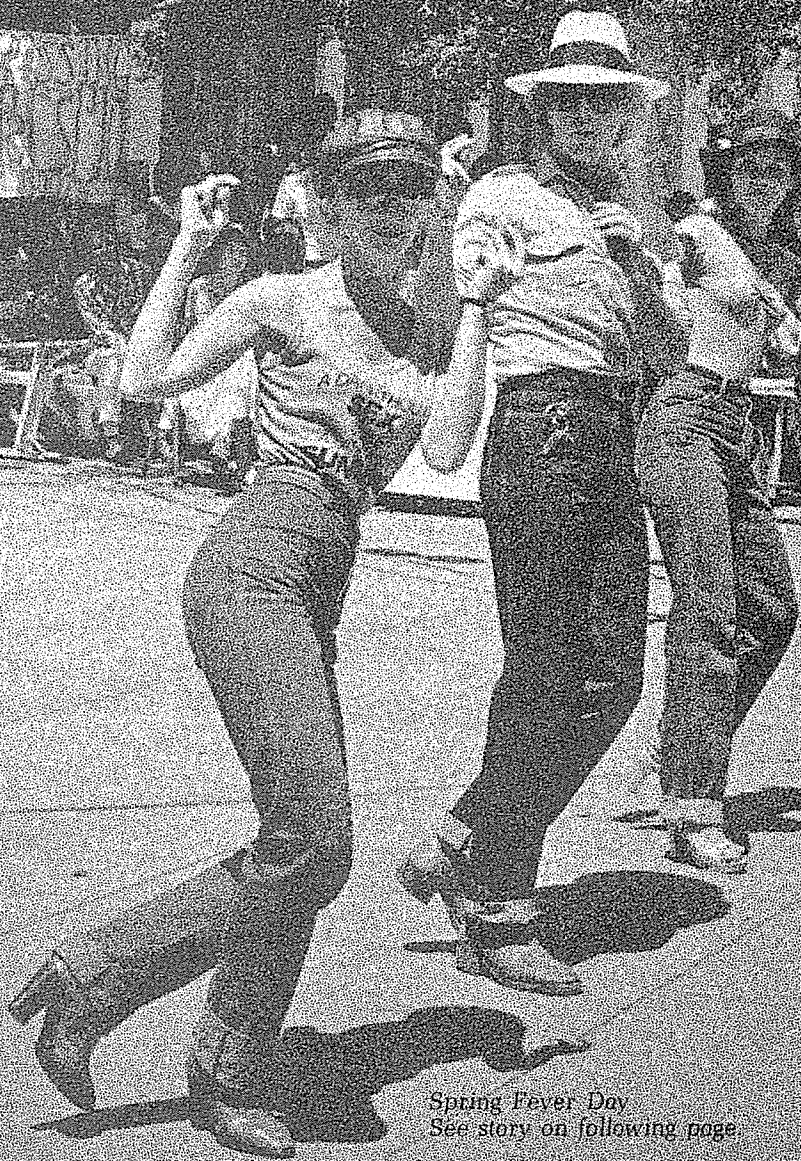
**Carl A. Wagner**  
History, Political Science,  
Permanent Resident (Immigrant)  
Student Advisor

**David D. White**  
English

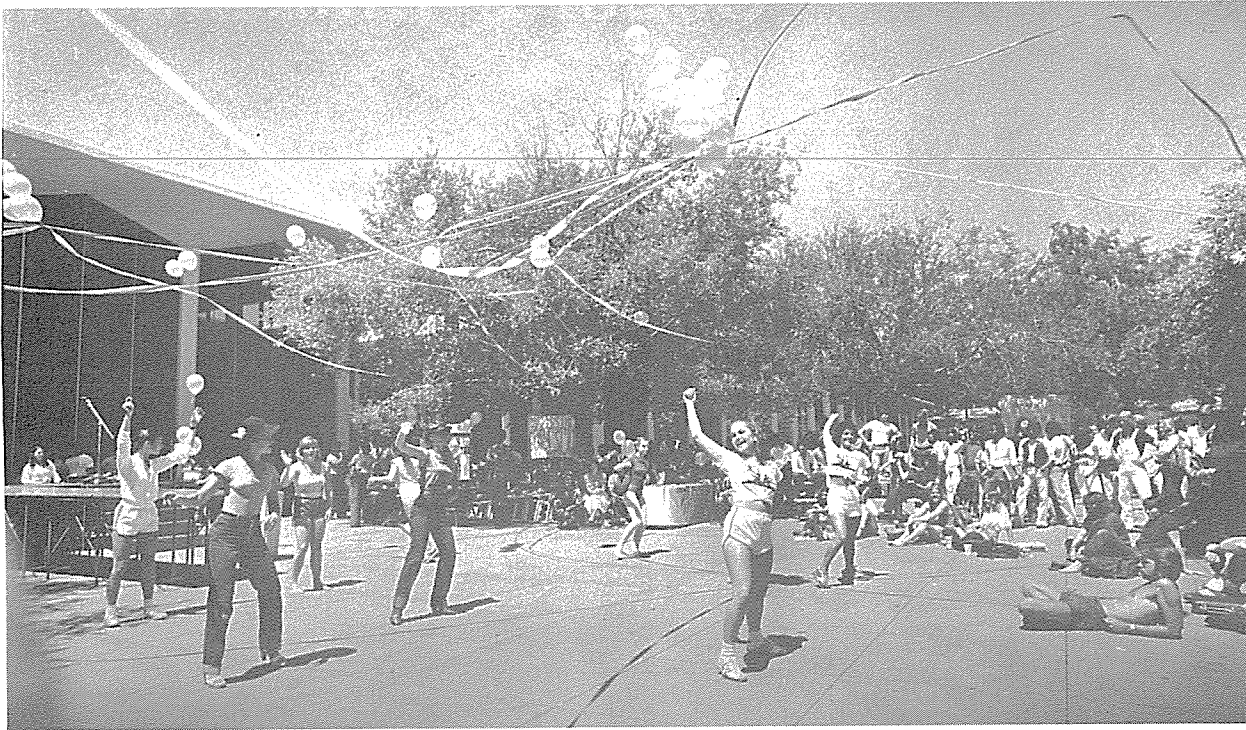




# General Information



Spring Fever Day  
See story on following page.



## STUDENT SERVICES

Thousands of carnations and helium balloons with "get away" messages greeted CSM students the morning of Spring Fever Day. It was all part of a plan by the Student Programs Board to provide distractions guaranteed to make even the most studious student forget academic worries for a day.

The popular annual event reached new heights with festivities that included live music, games, and CSM's version of the Gong Show. Street vendors, especially invited from San Francisco where vendors are known to outdo one another, filled the student plaza. Free ice cream and lunch priced at 50¢ made the day satisfying for the stomach and easy on the budget.

Though Spring Fever Day happens only once a year, there are weekly activities for students to help them retreat briefly from their books. Each Tuesday and Thursday "College Hour" is held at 11 a.m. which brings live music, films and speakers to campus. Recent popular programs include a History of the Beatles Film Festival, a performance by a professional mime troupe, and a Mr. Bill Program. Other activities such as Welcome Dances are held during evening hours.

Bringing activities and services to students is one of the major functions of student government at College of San Mateo. Not only does the student body benefit, but so do the individuals involved in student government. Among skills developed by Student Senators and Student Program Board members are the ability to respond appropriately to the wishes of their constituents and the ability to work cooperatively with peers. As the Student Activities Coordinator observed, "The classroom facilitates intellectual skills while student activities promote social skills."

A second function of student government is representation. Student government serves as the official voice of the students to the faculty, administration and the Board of Trustees. Students from each division select a representative from among their numbers to sit on the Student Senate.

David Sapiro, Student Body President 1979-80, believes the experience has lifetime application. "Because student government is set up so that the students make the decisions just as any group of people would (be it in large corporations, small businesses, community groups, governments, etc.) what students learn here is directly applicable toward the outside world."

## General Information

### The District

Starting with just 42 students when it first opened its doors at the Baldwin campus in downtown San Mateo in 1922, the San Mateo County Community College District has grown to a complex of three modern campuses serving more than 30,000 day and evening students from throughout San Mateo County.

In the beginning, the District consisted only of the area within the San Mateo Union High School District. In 1937 the Jefferson Union and Half Moon Bay high school districts were included, and the San Mateo Junior College District Board of Trustees was established. Sequoia Union High School District joined the college district in 1961, and South San Francisco Unified School District was annexed in 1966. (The name of the District was changed to San Mateo Community College District in 1973.) In July of 1976 the District annexed the La Honda-Pescadero Unified School District, and in recognition that District boundaries now coincided with those of the County, the word "County" was added to the District's name.

First classes were held in a building shared with San Mateo High School in downtown San Mateo. In 1923 the College moved to a large house on the Kohl Estate, in what is now San Mateo's Central Park, and added some tents to handle the overflow attendance. Four years later the high school occupied a new campus, and the College moved back to the Baldwin campus.

In 1939 a new campus went into operation at North Delaware Street and Peninsula Avenue, San Mateo, but because of World War II development of the site was curtailed. As a result, when the tide of returning servicemen began to roll in at the war's end, the College leased the Merchant Marine Cadet School at Coyote Point, San Mateo, and added those facilities to the classrooms at the Baldwin and Delaware campuses, thus conducting classes simultaneously at three separate locations.

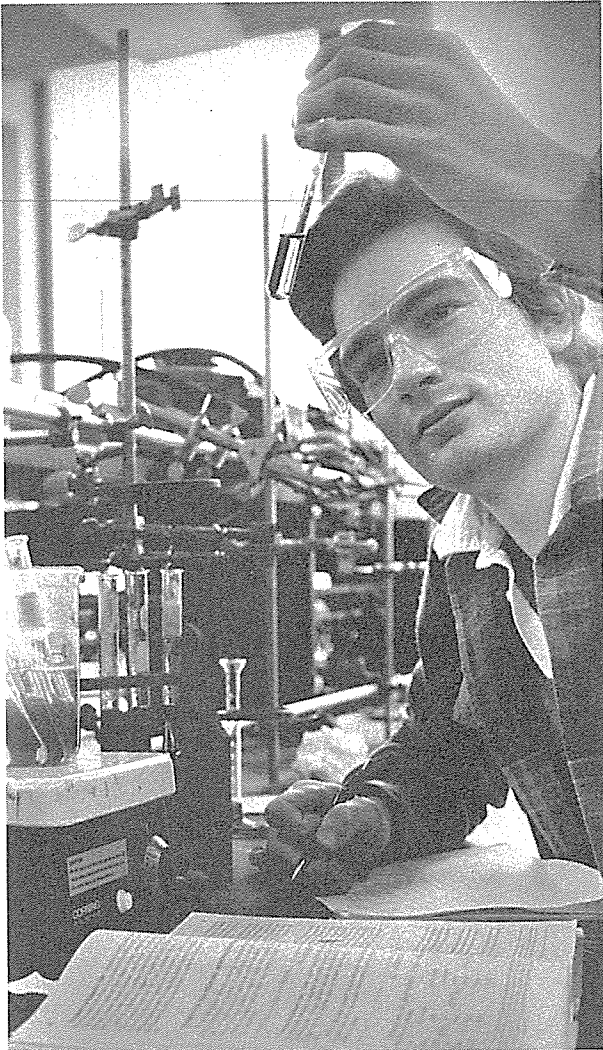
In 1957 the Board of Trustees developed a 25-year District master plan based on the recommendations of a Citizens Advisory Committee, and the same year submitted a \$5.9 million bond issue to voters that was approved by an overwhelming 3 to 1 margin.

The bond issue victory cleared the way for prompt acquisition of the present College of San Mateo campus, and also provided funds for purchase of a 111-acre site west of Skyline Boulevard and south of Sharp Park Road in San Bruno. A third site, of 131 acres west of the Farm Hill subdivision on the Redwood City-Woodside line, was purchased in 1962.

College of San Mateo campus was opened in 1963, followed by Cañada College, Redwood City, in 1968, and Skyline College, San Bruno, in 1969. Construction of Cañada and Skyline was made possible in large part from proceeds from a second bond issue of \$12.8 million approved by District voters in 1964.







## The College

College of San Mateo, the oldest of the three colleges in the San Mateo County Community College District, is located on a 153-acre site that provides a panoramic view of the entire north Bay Area.

Completed at a cost of almost \$19.5 million, the campus opened its doors in 1963 and currently serves more than 15,000 day and evening students. It enrolls students from the entire District, although its chief service area is central San Mateo County.

The College's main educational structures are built along a north-south axis provided by the main pedestrian mall. A second mall, running east and west, connects the Fine Arts Center with the Library. Total gross

space is 537,000 square feet, with 160 teaching stations, plus offices, storage rooms and support facilities.

The architectural style for College of San Mateo emphasizes both aesthetics, in dignity and structural clarity, and practicality—a fitting setting for pursuing a quality education.

## Mission and Goals

### San Mateo County Community College District Master Plan

#### Mission

San Mateo County Community College District, recognizing each individual's right to education, is committed to leadership in providing quality education in partnership with its community to:

- identify and respond to the educational needs of the community;
- provide an environment which enables students to realize their individual potential;
- encourage the pursuit of lifelong learning in a changing world; and
- maintain a climate of academic freedom in which a variety of viewpoints may be shared.

#### Goals

The colleges of the San Mateo County Community College District shall, within available resources:

1. provide varied educational opportunities which acquaint students with the broad outlines of human knowledge and experience;
2. provide lower-division transfer programs which prepare students for continued education in four-year colleges and universities;
3. offer occupational education programs directed toward personal and career development, in cooperation with business, industry, labor, and public service agencies;
4. offer developmental education courses to enable students to improve those basic skills essential to successful completion of college goals;
5. identify and meet community needs, not otherwise served by college credit courses, through offering short-term, non-credit community services programs, courses, and activities;
6. provide a comprehensive program of student services to assist students in attaining their educational goals;
7. actively support a program of affirmative action in student recruitment and personnel employment;
8. make programs accessible through varied methods of instruction, scheduling patterns, and support services at appropriate locations and facilities.

## Philosophy and Purposes of the College

College of San Mateo has established its educational philosophy on three fundamental premises: that a free society requires intelligent support; that the individual has worth and dignity; and that a college has obligations both to society and the individual.

As a corollary to these premises, the College realizes that in its role of community college it must remain sensitive to changes in the needs of its area and evolve its educational offerings in response to those needs.

In general the purpose of College of San Mateo is to provide education beyond the high school level for the people in its area who can profit thereby. This education is designed to help the student realize his or her potential by pursuing cultural and vocational abilities. It prepares the student to assume the responsibilities of citizenship in our free society. It attempts to develop in the student the ability to think clearly.

To achieve its purpose, College of San Mateo offers the following kinds of education:

**General Education:** Instruction which helps students function effectively as individuals, as members of their families, and as citizens with local, national and world responsibilities.

**Lower-Division College Education:** Courses which enable students to complete the first two years of four-year college work. These courses satisfy the lower division requirements in the liberal arts and in scientific, engineering and other professional and technical fields.

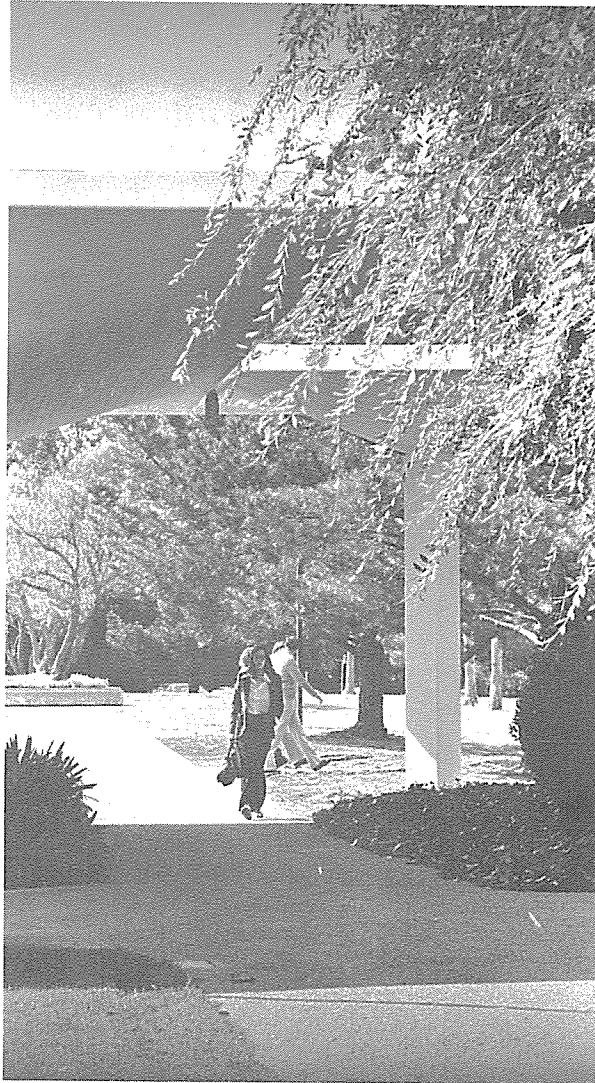
**Career Programs:** Instruction designed to develop personal and technical competencies necessary for successful employment in specific careers.

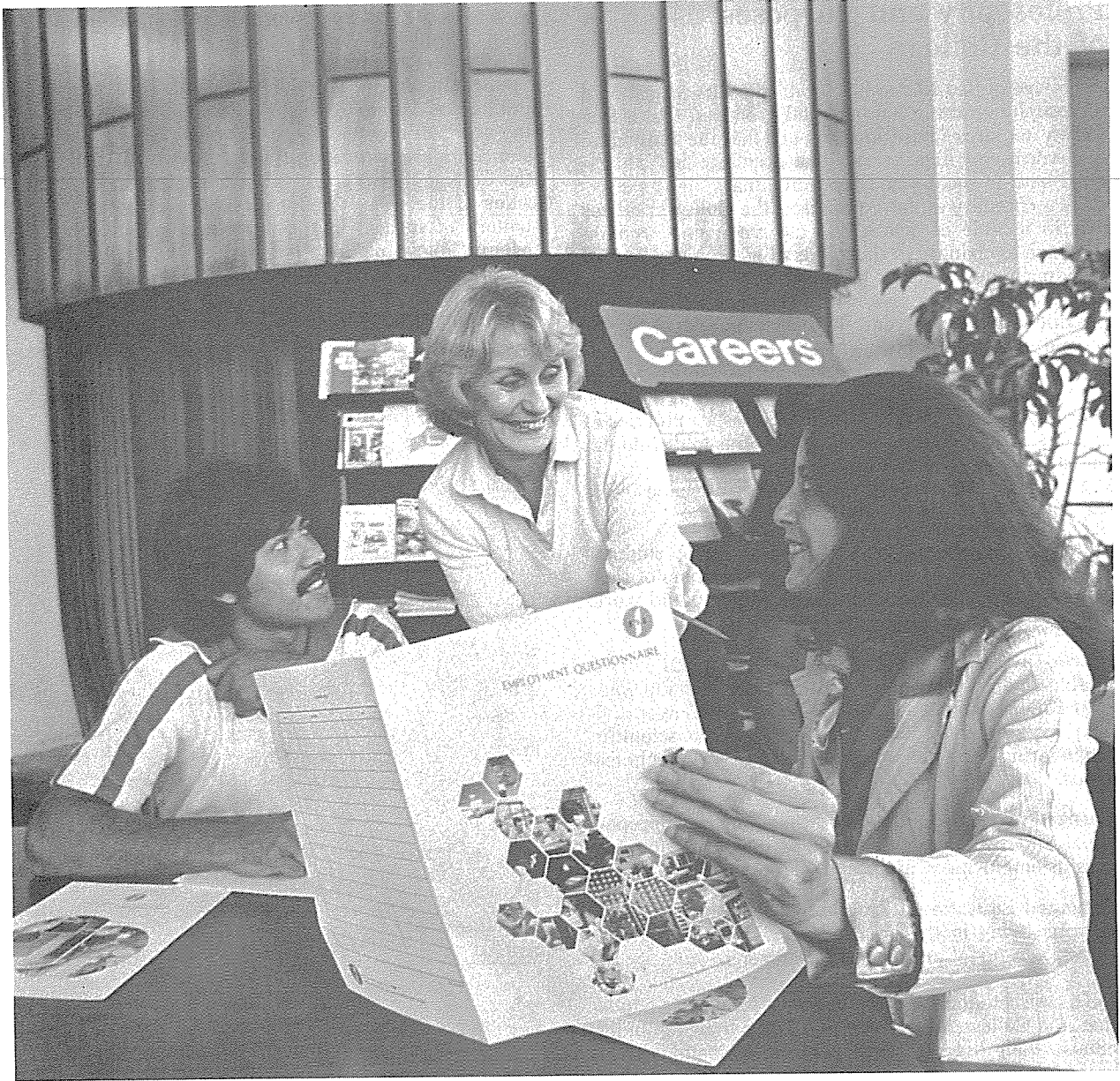
**Extended Educational Programs:** Classes in which all persons living in the area may broaden their educational, vocational and aesthetic horizons.

To assist students in profiting most from their education, the College helps them to explore their aptitudes, choose their lifework, and plan an educational program which will prepare them for that work. It offers this assistance through a formal program of guidance and counseling, and through informal student-teacher relationships, which are among the most distinctive and valuable of its services. The College recognizes the educational value of organized student activities and encourages students and faculty participation in these activities.

Situated as it is, close to San Francisco and several fine colleges and universities, College of San Mateo is

part of a colorful community which enjoys many cultural advantages. Many College of San Mateo graduates transfer to the University of California, California State Colleges and Universities, as well as other major public and private colleges and universities. Because the needs of these students who transfer to upper-division work are carefully provided for in the curriculum, the College enjoys a fine reputation among the universities of the state. Graduates have consistently had a pattern of success in transfer educational institutions. Many College of San Mateo students, having temporarily completed their formal education with the Associate in Arts or the Associate in Science degree, find employment in business and industry.





## Accreditation

College of San Mateo is fully accredited by the Western Association of Schools and Colleges, the recognized local agency which is affiliated with the Federation of Regional Accrediting Commissions of Higher Education

## Revision of Regulations

Any regulation adopted by the Administration of College of San Mateo will be considered an official ruling and will supersede regulations on the same subject which appear in this catalog and other official publications, provided that the new regulation has been officially announced and posted.

## Veterans and Veterans' Dependents

College of San Mateo is listed by the Veterans Administration as qualified to receive students under Chapter 34 (veterans), Chapter 35 (veterans' dependents) and Chapter 31 (vocational rehabilitation). All students, except those under Chapter 31, buy their own books and supplies. Those interested in attending College of San Mateo under any of these chapters should contact the Office of Veterans' Affairs, Rooms 249 and 251 in the Administration Building, to determine eligibility for benefits.

## Costs to Students

All day students are required to pay a nominal Health Service and insurance fee for each semester.

Each student purchases his/her own textbooks and supplies. A considerable saving is possible through the purchase of used texts from the on-campus College of San Mateo Bookstore. Excluding living and transportation costs, the total of all expenses, including membership in the Associated Students, should not exceed \$250 per semester. Special equipment is needed for certain courses such as Electronics, Drafting, Nursing, Cosmetology, Engineering, Art and Architecture, involving an additional initial outlay ranging from \$25 to \$250. Please refer to course descriptions for special costs.

In addition to other costs, non-residents pay tuition.

## Tuition (Non-Resident Fee)

No tuition is charged to legal residents of California who reside in San Mateo Community College District. No tuition is charged to legal residents of California (see Residence Requirements for Admission on page



38) who reside outside of San Mateo County and qualify for admission.

Out-of-state residents pay a non-resident fee of \$1,690.80 for the academic year 1980-81. The fee is payable at the time of registration each semester at the rate of \$56.36 per unit or a maximum of \$845.40. (See Refund Policy, page 40.)

Resident status is determined by the Office of Admissions and Records. Detailed regulations governing non-resident fee and admission requirements will be distributed to students who apply for admission.

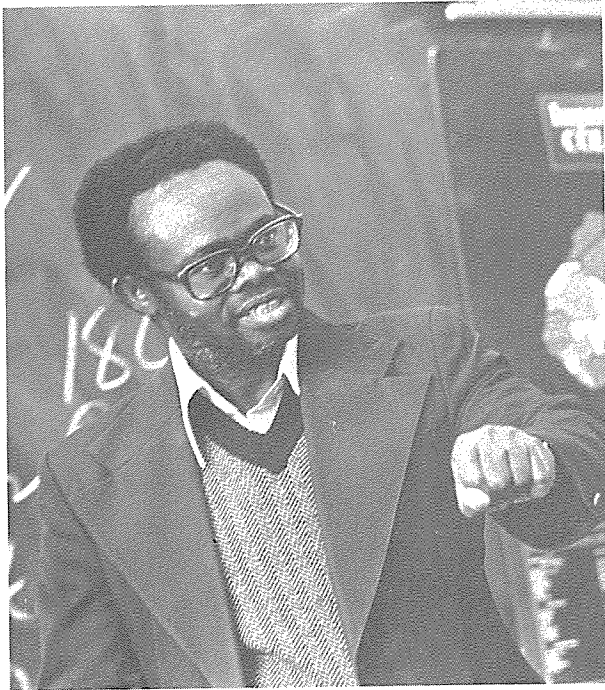
## Parking

Parking for students is provided in clearly designated areas on the campus. Most of the parking is located at the entrance to the college, in the southwest sector of the campus. Certain parking areas are reserved for visitors with permits and for staff who hold permanent parking permits. Spaces for physically handicapped students and provisions for persons with major medical problems are available. Student parking is provided in Lots 1, 2, 3, 9, 10, 10A, 15, 16, and 17. Portions of Lots 2 and 3 have some spaces reserved for permit parking. Locations are shown on the campus map. Parking and traffic regulations are enforced by the Campus Security Office and violations are cited to the San Mateo Municipal Court. During the evening hours, portions of Lots 3, 8, and 11, reserved during the day, are open to student parking.



## High School Diplomas

The College does not issue high school diplomas. Students who wish to complete requirements for the diploma should consult the high school they last attended to determine graduation requirements. College courses used to satisfy a high school diploma requirement may not be used toward a college degree. Stu-



dents who are unable to make arrangements with their previous high schools can contact the office of the high school district in which they now reside. Counseling services for high school diplomas may be obtained by persons living in the San Mateo Union High School District by phoning 347-9871 and asking for the Adult Education Counselor.

## Policy of Nondiscrimination

College of San Mateo is committed to equal opportunity regardless of sex, marital status, physical handicap, race, color, religion or national origin, for admission to the College, enrollment in classes, student services, financial aid, and employment in accordance with provisions of Title VI of the 1964 Civil Rights Act, Title IX of the Educational Amendments of 1972 (45 CRF 86), and Section 504, Rehabilitation Act of 1973 (P.L. 93-112).

It is important that students, staff, and all others associated with the College understand the importance of reporting concerns about possible violations of this policy. The College's commitment to equal opportunity demands full investigation of possible violations and an opportunity for a fair and impartial hearing on any matter relating to these laws and policies.

Any person seeking information concerning these laws and policies or claiming grievance because of alleged violations of Title VI of the 1964 Civil Rights Act and Sec. 504 of the Rehabilitation Act of 1973 should contact the Director of Special Programs and Services, Administration Building, Room 209, telephone 574-6181.

All grievances will be reviewed in terms of Title VI and Title IX law, and persons involved will be advised of the provisions of the law and their legal rights. If normal channels are not available or fail to meet legal requirements, the necessary action will be initiated. The office will maintain a record of all Title VI and Title IX grievances, and will report to the Affirmative Action Committee the general nature of such grievances and progress toward their resolution.

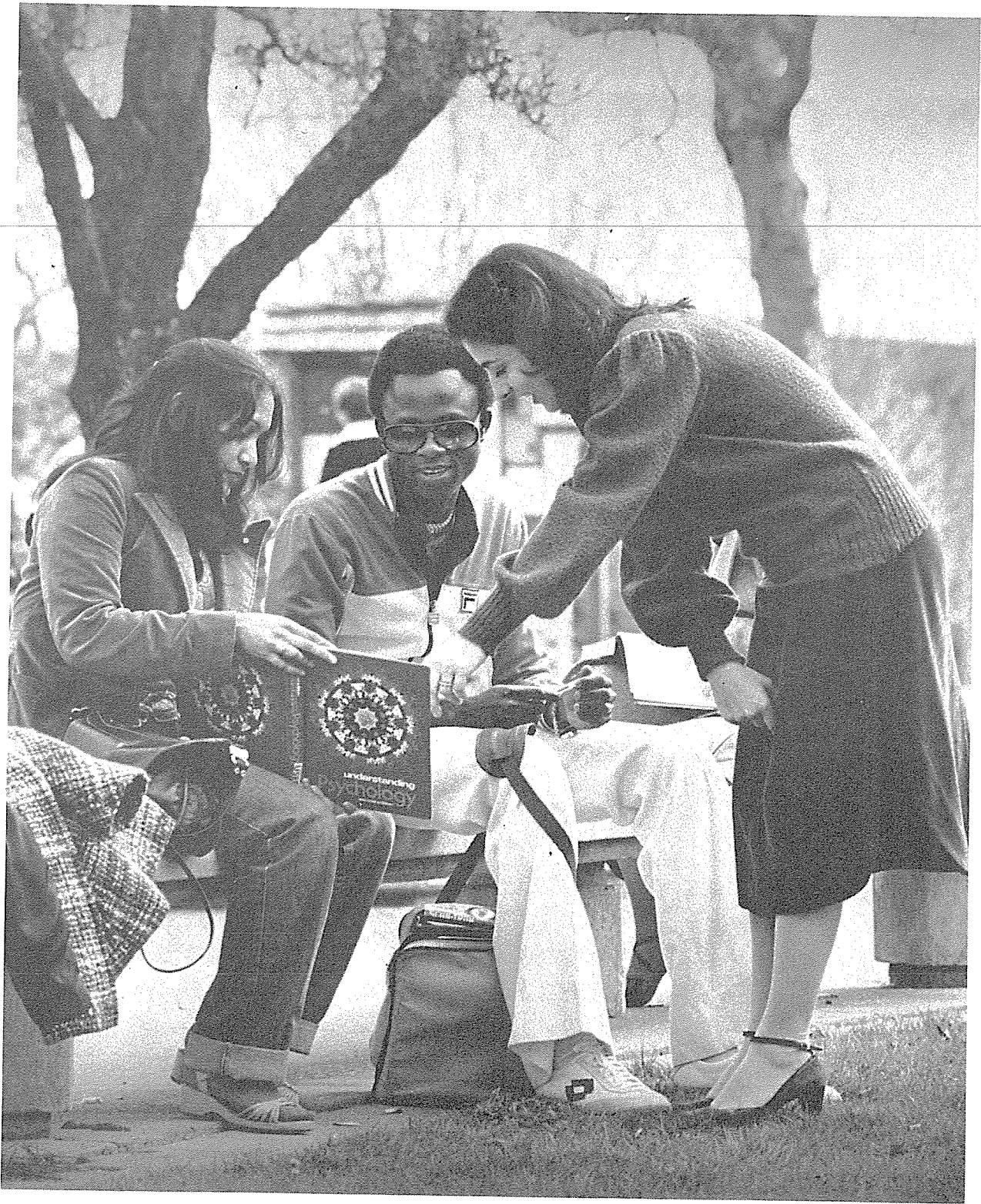
## Privacy Rights of Students

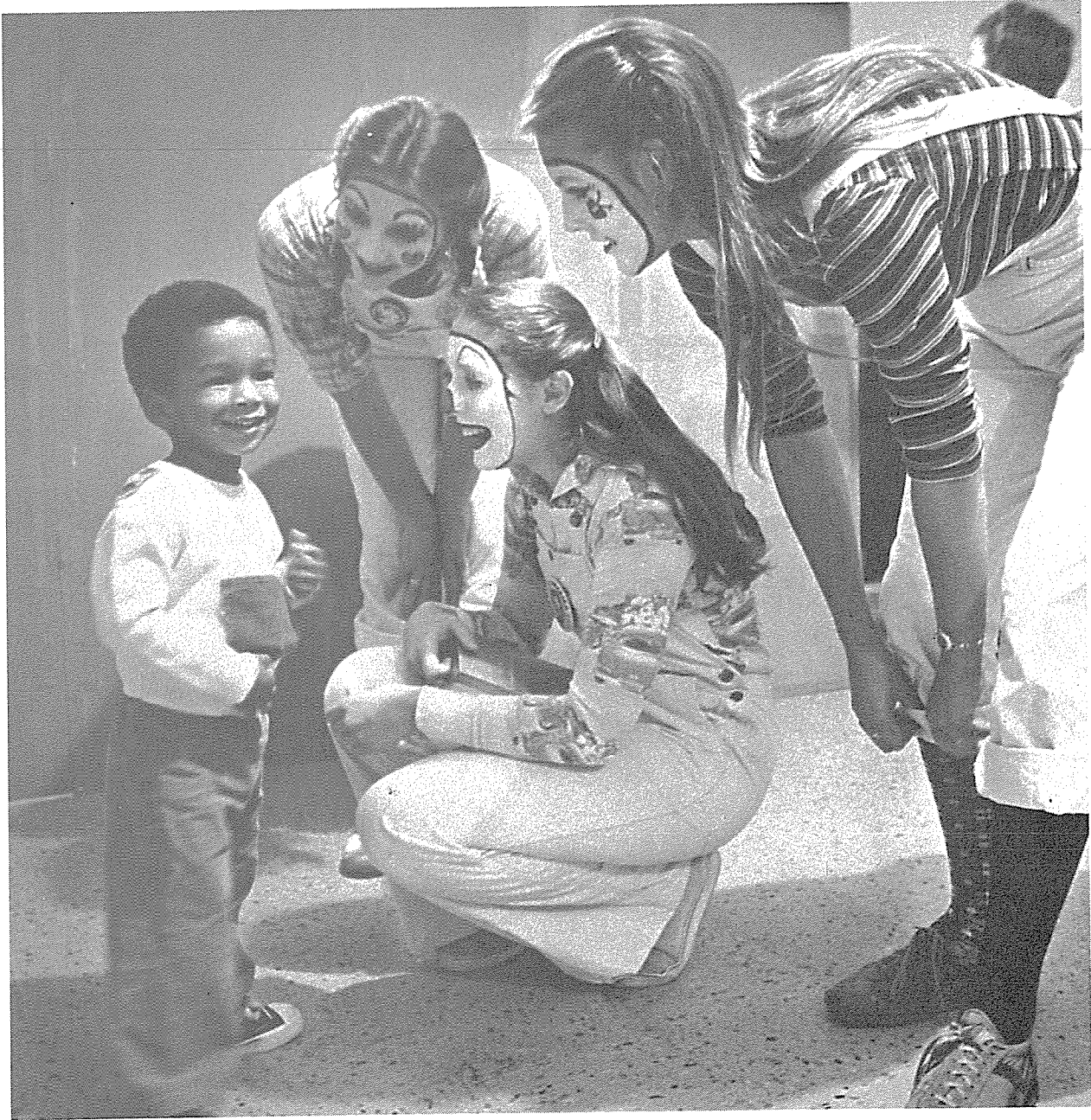
The Family Educational Rights and Privacy Act (Sec. 438, P.L. 93-380, as amended) requires educational institutions to provide: access to official educational records directly related to the student; an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading, or otherwise inappropriate; that the College must obtain the written consent of the student before releasing personally identifiable information from records to other than a specified list of persons and agencies; and that these rights extend to present and former students of the College.

The Act provides that the College may release certain types of "Directory Information" *unless the student submits a request in writing*, to the Records Officer that certain or all such information not be released without his/her consent. "Directory Information" at this College includes: (1) student's name and city of residence; (2) participation in recognized activities and sports; (3) dates of enrollment; (4) degrees and awards received; (5) the most recent previous educational agency or institution attended; and (6) height and weight of members of athletic teams.

A copy of the College Policy, the Family Educational Rights and Privacy Act (Sec. 438, P.L. 93-380) and other pertinent information and forms are available in the office of the Records Officer, Administration Building, Room 210, during normal working hours. In addition, a complete statement describing procedures appears in the **Schedule of Classes**.

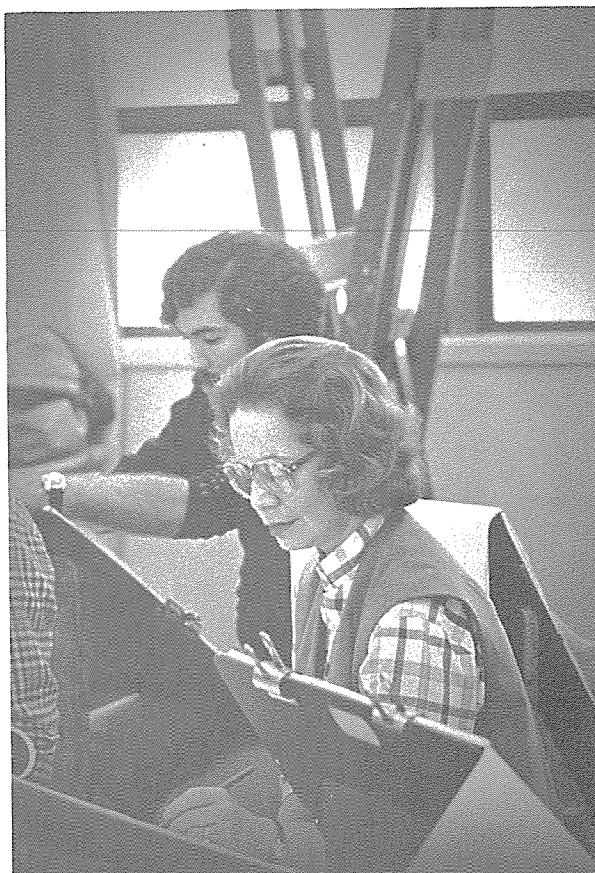
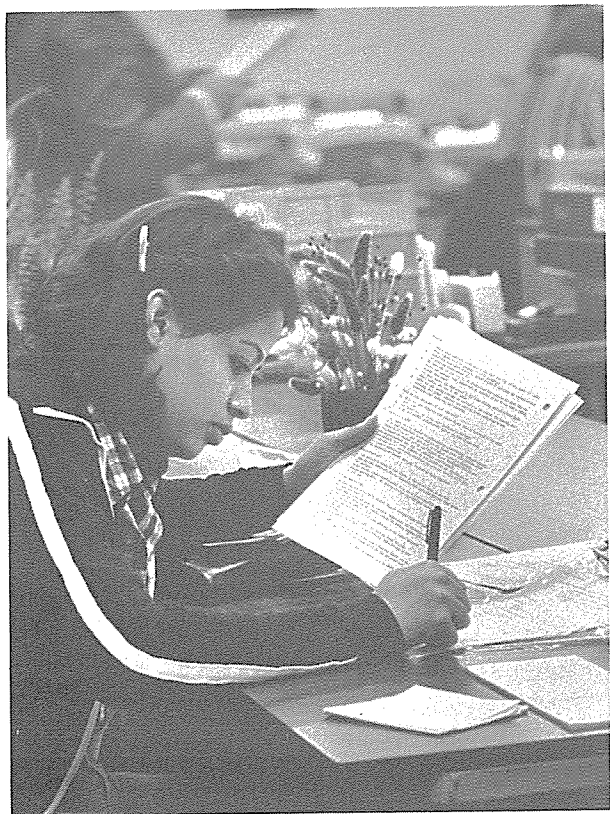






## The Learning Resources Center

The Learning Resources Center is designed to meet the many and varied learning needs of CSM students and to support the faculty in the development of innovative instructional programs. With its panoramic view of the Bay Area, the three-story Learning Resources Center is an inviting place for both students and faculty to study and browse. The Library, located on the main floor, offers general book, reserve, reference, periodical, and microfilm collections. The mezzanine is the open-stack book area. (Non-book media are located on the lower floor in the Coordinated Learning Lab.) The card catalog lists both print and non-print media. There are many tables for individual study and carrels in the open-stack areas, as well as a typing room with copy machine and group study facilities. In the library collection, there are approximately 100,000 volumes, 500 carefully selected periodicals, and 3,200 reels of microfilm. The Library is open Monday through Friday when classes are in session. Specific hours for the daily schedule and for holidays are posted at the Library entrance.



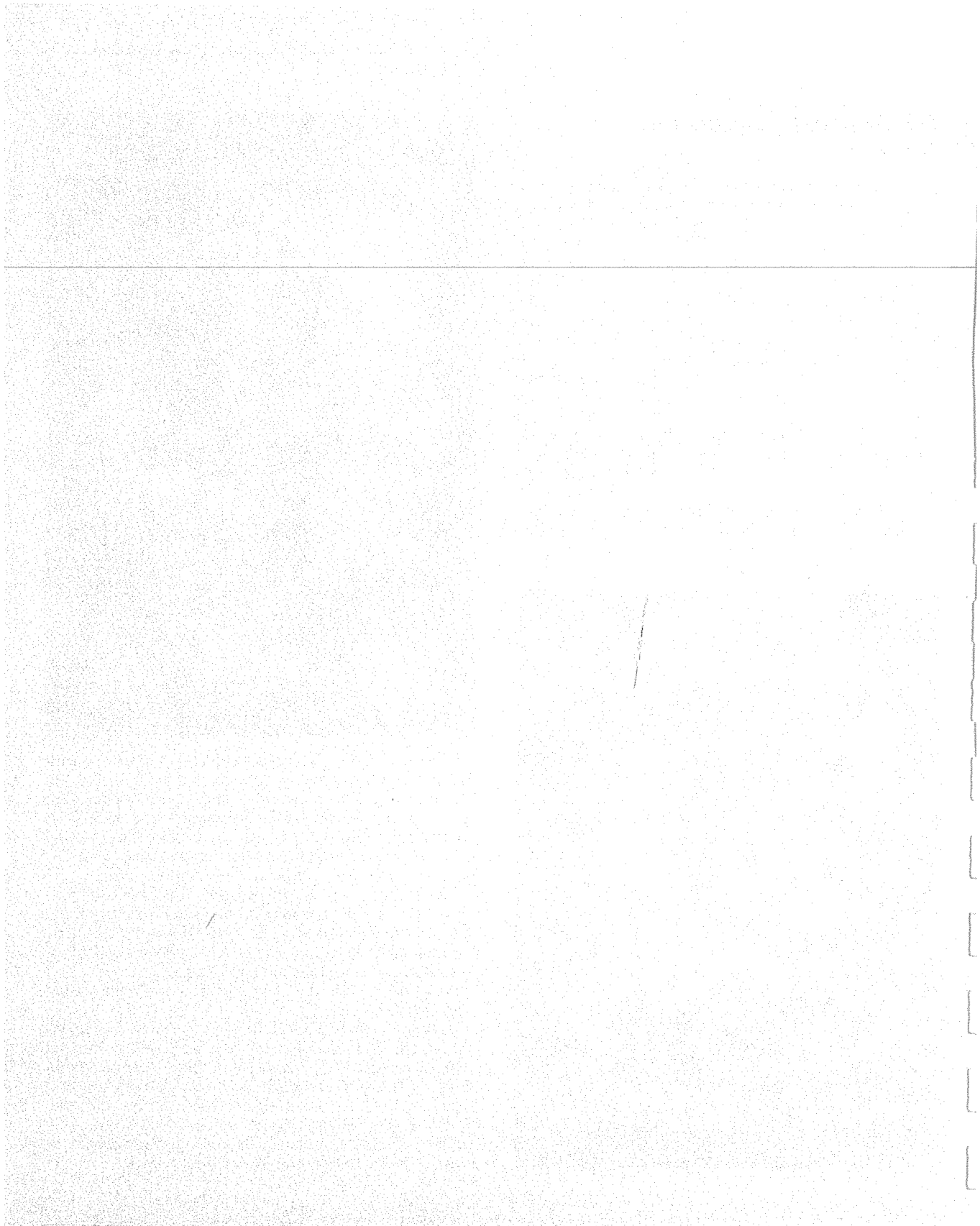
The lower floor houses the Media Center, with many listening/viewing stations and 30 program sources using both reel-to-reel and cassette. There are two language labs available for student use, as well as faculty recording studios, preview rooms, photography darkrooms, a media production center, and a media equipment storage, repair and distribution area.

The Media Center staff oversees this area and provides faculty with expertise in media and instructional design. The non-print collection contains 8,000 disc records, 8,000 tape and cassette recordings, 400 films, and thousands of slides and filmstrips.

Also located on the lower floor are the television and radio studios.

Through its new 1.5 million watt transmitter, KCSM-TV, Channel 60, provides courses to those students not able to come to the campus for their learning experience. Closed-circuit television provides both live and taped video for some 90 classrooms on campus. KCSM-FM broadcasts stereo to the greater Bay Area on 91.1 Mhz, providing a wide variety of programming to meet both student and community needs.





# Evening Programs and Summer Intersession



*Black History Week  
See story on following page*



## STUDENT SERVICES

The voice, the gestures, and the body movements quickly drew listeners into the performance of East Palo Alto poetess Kalamu Chache, who recited from her works as part of this year's campus tribute to Black History. She accompanied her recitals with a rhythmical style of delivery, finger snapping, piano plunking and hand shaking with a surprised audience.

In her readings, Ms. Chache stresses a positive message of love and unity that is ultimately rooted in traditional black family values. Her poems are pointed directly at her listener's personal life, inspiring them to develop their goals and to display self-confidence with a throbbing sense of pride.

The week-long Black History commemoration, planned and conducted by students, is one of several observances sponsored through the College Readiness Program/EOPS Multicultural Center. Students arranged for Dr. Kalil Faheem, a local black TV broadcaster, to speak during the week on black leadership in the 1980's. The festivities celebrating Black History Week also included an appearance by a black dance ensemble, hair braiding demonstrations, fash-

ion shows, feature length movies addressing black-related issues, and authentic African folk rituals.

Working in cooperation with CRP/Multicultural Center, students hope to stimulate awareness of the diverse cultural mix represented by the student body. Other focal points for major activities during the year are an annual Latin American Day and Chinese New Year.

The Latin American countries, which contribute many students to the CSM campus, are highlighted in early May in conjunction with Cinco de Mayo. Among their favorite entertainments, students arrange for costumed dancers to perform traditional steps to traditional music. The counselor for Latin American students, Adrian Orozco, sees these student activities as a way to "look positively on our cultural past."

Chinese New year is celebrated each February. This year's festivities included a Lion Dance performed by students and the sale of typical Chinese food. In May, Asian and Pacific Island students participate in Asian Pacific Cultural Heritage Week with activities both on and off campus. Displays of paintings, ceramics, and photographs add to the cultural exchange fostered by these events.

## Evening Program, Summer Intersession and Instructional Television

### Evening Program

College of San Mateo serves not only full-time day students, but those who may have commitments at work or home which prevent them from attending during daytime hours.

Evening classes provide opportunities for students to resume interrupted education and to investigate new fields of interest; to take college courses leading to an Associate in Arts or Science degree or for transfer credit; to complete requirements for a certificate program; and to enroll in general continuing education classes for self-enrichment or improvement of job skills.

Classes in the evening program are open to persons who are over 18 years of age or are high school graduates. Students attending high school must have permission of the Office of Admissions and Records to attend evening classes. In credit classes, all students must enroll for the prescribed number of units, complete the required work, and be assigned a grade; no auditors are allowed. All units earned in credit classes are applicable toward the Associate in Arts or Science degree. Registration procedures are included in the Schedule of Classes, which is distributed at the college and through local libraries about four to six weeks prior to the beginning of each semester (see Calendar).

Certificate programs, planned mutually by the college and advisory committees, are available in the evening and include: Ornamental Horticulture, Vocational Gardening, Real Estate, Fire Science Training, Administration of Justice, Teacher Assistant, Aeronautics, Secretarial, Business Management, and Business Merchandising. Certificates in these fields are issued upon completion of required and elective courses, and the units earned in them may be applied toward the Associate in Arts or Science degree for those persons who wish to continue their education.

Separate brochures are available at the Office of Extended Educational Programs in the Administration Building for outlines of programs, course descriptions,

explanations of programs and certificate requirements. At the beginning of the final course required for a certificate, it is the responsibility of each candidate to file an application in the Office of Admissions and Records (see Calendar).

### Evening Final Grade Reports

Final grade reports will be mailed to all evening students enrolled in credit classes. Mid-term grade reports will be mailed to an evening student only if his/her cumulative record shows a potential probation or dismissal status.

### Evening Fees

The College of San Mateo does not charge evening tuition. Certain courses have fees covering special supplies, services or equipment which are payable by both adult and minor students.

### Out-of-District Students

With the exception of residents of San Francisco and Peralta Community College districts, students whose legal addresses are in another community college district are required to present a release from that district before being allowed to register in any evening class. This release must be presented at the time of registration; places cannot be reserved for students who intend to secure a release at a later date.

### Out-of-State Students

Out-of-State students may register in evening classes, but will be required to pay at the rate of \$56.36 per unit for courses at the time of registration (see Tuition Policy, page 25).

## Foreign Students

Students who are legal residents of another country and are in the United States on other than immigrant visas may not register in evening classes without approval of the Office of Admissions and Records. Immigrants as residents in the District are eligible to register.

made for the hours 7 until 9 p.m. by calling 574-6165. Anyone who wishes individual counseling should bring transcripts of previous work to his/her interview. Contact the Office of Admissions and Records for an appointment.

Additional career counseling and career exploration services are available through the Career Development Center and regularly offered Career and Personal Development classes (CRER 132, 133, 410, 430).

## Evening Testing

The School and College Aptitude Test (SCAT) and Coop English Test are administered each semester for students planning counseling appointments. The English test is required of all students planning to enroll in English classes.

## Evening Registration

Registration for classes and dates of registration are described in detail in the class schedules. Registration in classes is closed at the end of the second class meeting if the class meets once a week and the third class meeting if the class meets twice a week. It is recommended that beginning students with full-time occupations do not enroll for more than two evenings per week. No auditors are permitted.

## Evening Schedule of Classes

A schedule of classes, indicating times, days and locations, is printed for each semester and is available prior to the registration dates at College of San Mateo and the public libraries. While the basic program in the evening is similar from year to year, the specific classes presented at any given time may vary from those of the previous semester. For offerings of any given semester, consult the current Schedule of Classes.

## Evening Academic and Career Counseling

Every effort is made to assist students in the wise choice of individual courses, major fields and even career goals. Drop-in counseling services are available in the second floor of the Administration Building from 6:30 until 7 p.m. Counseling appointments may be

## Withdrawal Procedure from Evening or Summer Intersessions

Students wishing to withdraw from an evening or summer intersession class must obtain a permit to withdraw from the Office of Extended Educational Programs or the Office of Admissions and Records, Building 1, second floor.

Withdrawal from evening and summer classes is the responsibility of the student. A student who does not withdraw, in accordance with established procedures, may receive a grade of "F."

## Summer Intersession

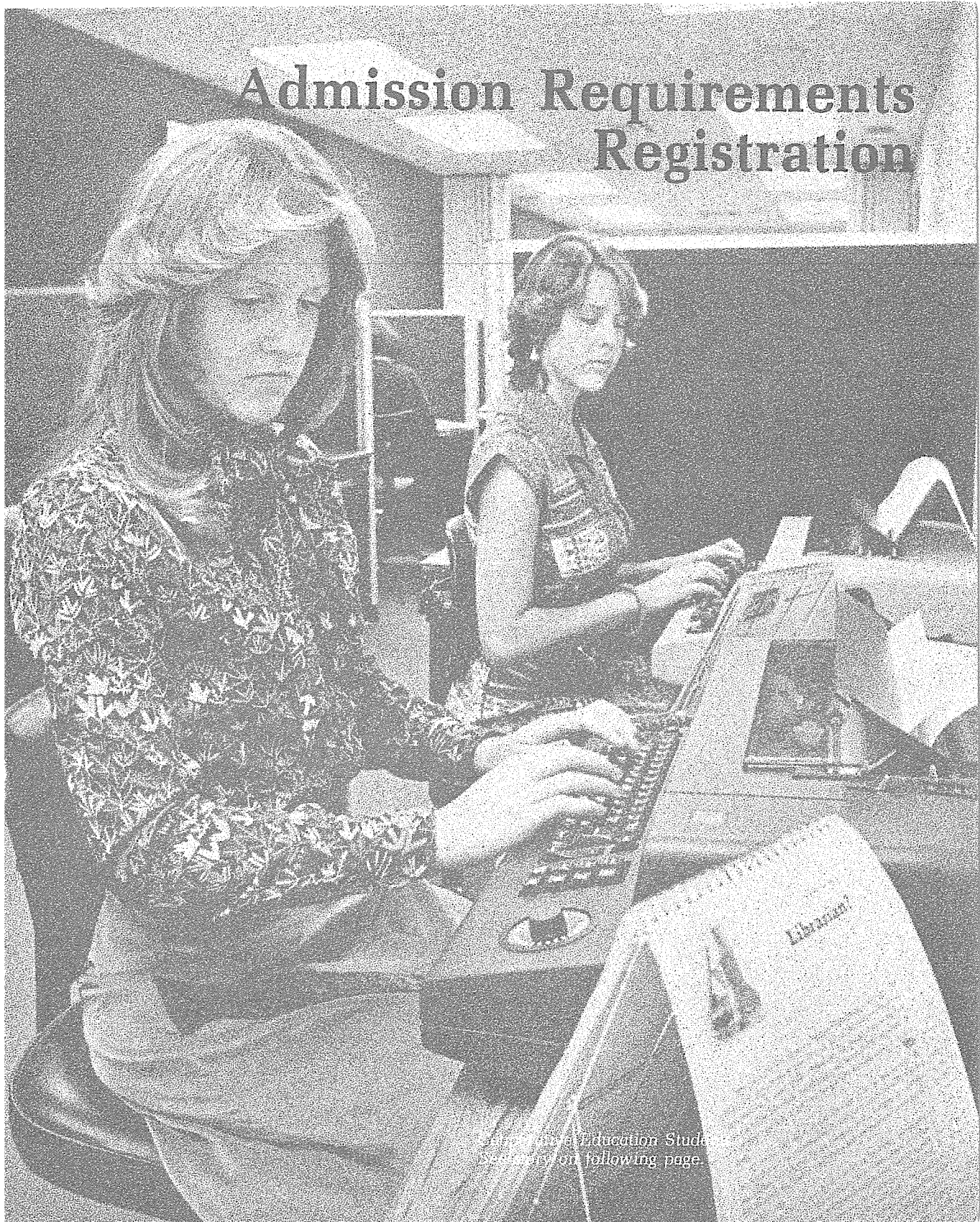
A balanced offering of day and evening summer Intersession classes enables students to accelerate their programs or satisfy course or curriculum requirements. The Summer Intersession also affords opportunity to exceptionally able high school students after completing the junior year to take selected college courses. Further information may be obtained by calling the College of San Mateo, Office of Extended Educational Programs (574-6544), or by contacting the high school counselor.

## Instructional Television

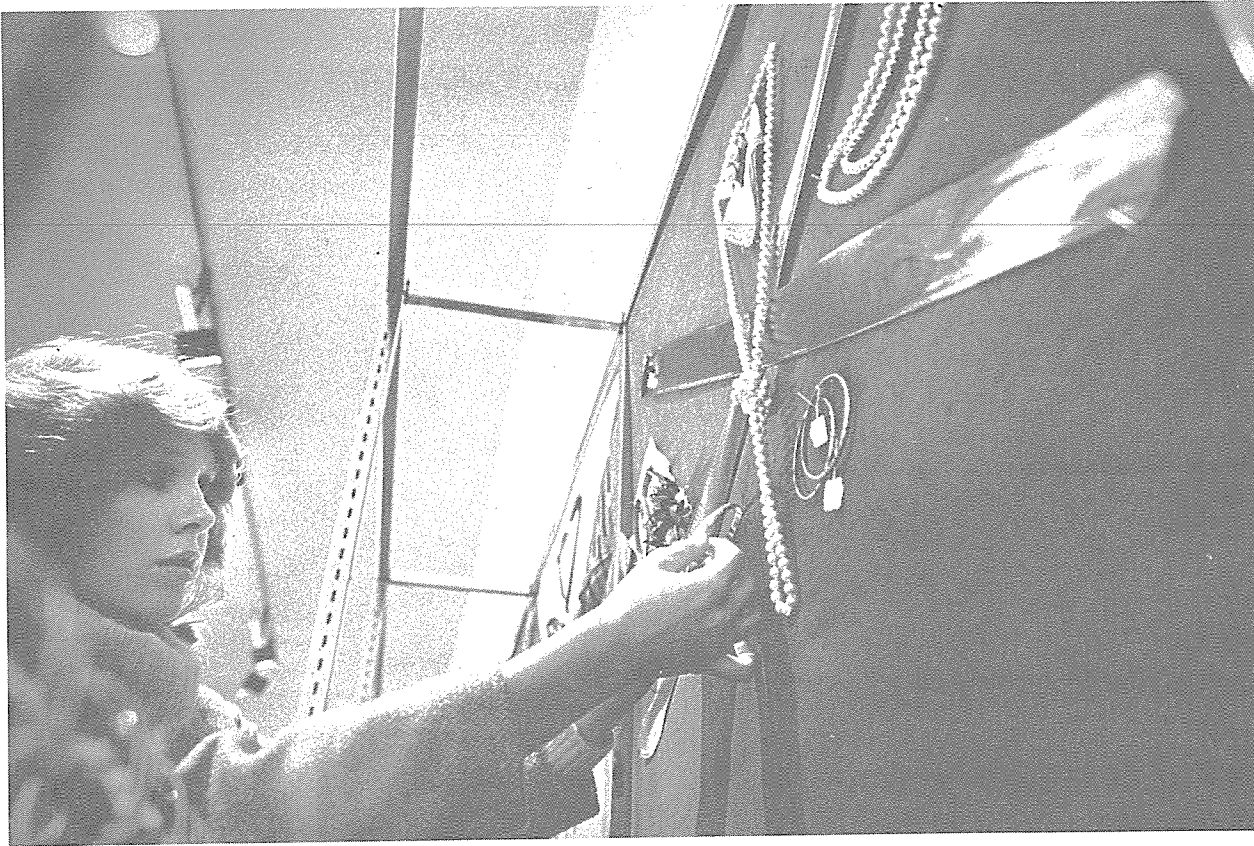
An extensive instructional television program is offered by College of San Mateo as an alternative delivery system. Telecourses present college level instructional material for students who wish to gain academic credit for a degree, a certificate or for personal enrichment. The credit which is earned may be applied to San Mateo County Community College District academic and occupational programs or transferred to most colleges and universities. See the Schedule of Classes for information on course Offerings.



# Admission Requirements Registration



For more information on the Education Study  
Program, see the following page.



## BUSINESS

Some of the best learning comes from on-the-job training. A large number of business students are afforded that opportunity through Cooperative Education, a joint venture between student, employer and college. Through this program students work part-time in jobs in merchandising, interior design, sales, data processing, banking, real estate marketing, business administration, secretarial, and personnel.

By working in jobs related to their majors students pick up the practical skills needed to prepare them for success in later careers. In addition they earn a salary and up to four units of college credit.

Co-op students are required to set certain specific objectives to be reached during the period of work and to write a term paper related to their work. The term projects often reflect in-depth learning on the job. For example, marketing student Jennifer Hantz, who has worked in various capacities at Ponce College of Beauty, will write her term paper on how to run a beauty school.

The Business Division is continually developing

new ways to prepare students for entry into the business world or for growth in a business career already underway. Evidence of this can be seen in the various business labs which are frequented by thousands of men and women every year.

An open lab for accounting students is now in operation, having opened in the spring of 1980. This laboratory situation allows students to attend at their convenience and to proceed at their own pace, so that each concept is mastered before the next is attempted. A multi-media system delivers the basic information to the students, with instructors nearby to give necessary assistance. College units are earned according to the material mastered.

Among the busiest labs are the Business Skills Center, which offers self-paced instruction in all levels of typing and machine transcription, and the data processing lab where students prepare themselves for the many jobs available in that field. Other business labs include the medical assisting lab, clerical skills lab, and a new accounting lab for paraprofessionals.

## Admission Requirements — Day Classes

### Admission

Admission requirements must be completed before a student will be permitted to register.

### Admission Requirements— Day Classes

Students applying to College of San Mateo who wish to enroll for more than 9 units per semester are required to:

1. File a written application for admission on forms supplied by the College.
2. Request that two complete transcripts be mailed directly to College of San Mateo by the high school of graduation (or the high school last attended), and each college attended.
3. Take Placement/Counseling tests and other specific examinations necessary. (See schedule of tests on Application for Admission).

Students who do not complete the transcript and test requirements for admission (2 or 3 above) may be limited to a maximum of 9 units in day classes at the time of registration (see Part-Time Students).

Priority for registration will be given to students who complete the admission requirements one month prior to the scheduled registration period.

### Transfer Credits

Credit will be allowed for lower-division work done in other accredited institutions. All work presented will be evaluated by the Office of the Admissions and Records.

### High School Graduates

Normally, graduation from high school or successful completion of the California High School Proficiency Examination or the General Education Development Examination (GED) is a prerequisite for admission.

Persons over 18 years of age may be admitted to classes for which experience and maturity will, in the opinion of the President, qualify them, even though they are not high school graduates.

Any person who is not a legal resident of California or who is a legal resident of another community col-

lege district in California should see "Residence Requirements for Admission." See Page 38.

### Transfers from Four-Year Institutions

Transfer students from four-year institutions are subject to CSM Academic Policy. See page 45.

### Transfers from Other Community Colleges

Students who have previously attended another community college and are in good standing are eligible to enroll at College of San Mateo, subject to residence requirements. Students who have been dismissed by another community college normally will not be admitted in the semester immediately following their attendance at that community college. After one semester's absence, such students may be admitted, subject to Academic Policy. See page 45.

### Former Students of College of San Mateo

Former students of College of San Mateo are eligible to return; however, if they have a grade point deficiency, they will be readmitted according to provisions of the current academic policies of the College. See page 45.

### Veterans

For academic credit purposes, a veteran is defined as an honorably discharged member of the United States Armed Forces who was on active duty for one year or more. Upon presentation of separation or discharge papers, veterans are exempt from the Health Science and Physical Education requirements for the AA/AS Degree. They are also entitled to six units of elective credit toward the AA/AS Degree.

In addition, veterans who qualify may receive credit for military service schools toward the Associate in Arts/Science degree upon presentation of proof to the Office of Admissions and Records. They must have completed a minimum of 12 units with a grade-point average of 2.0 at College of San Mateo. Units of credit

for military service (6 units) and military service schools will be recorded on a student's record.

## Part-Time Students

A student who plans to take a maximum of nine units is designated as a part-time student. A part-time student must file application by the deadline date but is not required to take the general placement/counseling tests or submit transcripts. A part-time student planning to enroll in an advanced foreign language course and/or English course is required to take the appropriate placement test.

A part-time student who plans to earn an AA/AS Degree and/or certificate, or who plans to transfer to a four-year college, should complete all admission requirements.

## Foreign Students

Only those foreign students who have completed the equivalent of an American high school education with satisfactory grades will be admitted.

In addition, foreign students will be required to demonstrate sufficient command of English to profit from instruction at the College. They must also present evidence that, while attending College of San Mateo, they have the necessary funds to take care of living expenses, a minimum of \$275 to \$350 a month if living in private homes.

Application for admission for the college year (fall semester) must be completed by the first week of April.

Foreign students are required to pay \$1,691 tuition for the academic year. The first year's tuition and a designated amount required for the purchase of an accident and health insurance policy must be paid prior to the issuance of an I-20 form.

Foreign students who have unusual circumstances that create financial hardships may petition for a waiver of tuition.

## Residence Requirements for Admission

The right to attend a public community college in California is, in addition to the academic requirements, determined by certain residence qualifications.

Non-residents, those students who have not been legal residents of California for one year or longer prior to the beginning of a term, are required to pay \$56.36 per unit with a maximum of \$845.40 per semester.

In general, an unmarried minor (a person under 18 years of age) derives legal residence from his/her

father (or from his/her mother if the father is deceased) or, in the case of permanent separation of the parents, from the parent with whom the minor maintains his/her place of abode. The residence of a minor cannot be changed by act of the minor or that of the minor's guardian, so long as the minor's parents are living.

An adult must take steps to establish legal residence in the state at least one year prior to the beginning of the term.

Information concerning acceptable documentation of intent to establish and maintain California residency and exceptions from non-resident tuition is available in the Office of Admissions and Records.

An applicant who is a legal resident of another community college district must be a graduate of a high school and must submit a written release from the community college district granting the student permission to enroll at College of San Mateo.

If an applicant is unable to obtain a release from the college district of residence, the student can attend by paying the non-resident fee of \$56.36 per unit.

## Choice of College

Residents of the district may elect to attend College of San Mateo, Cañada College or Skyline College. In the event the capacity of one college is reached, students may be diverted to one of the other colleges. Major and date of application will be taken into consideration if such diversion becomes necessary.

Admission requirements must be completed before a student will be permitted to register. See page 37.

## Counseling/Advising Appointments

Upon completion of admission requirements, new and returning students will be given a counseling/advising and registration appointment prior to the opening of each semester. (See Calendar at the front of the catalog.) Students register only after receiving program approval from a counselor/advisor.

## Unit Load Limitations

A normal class load is 15 units. No student will be permitted to take more than 19 units without special approval of the counselor/advisor and the Director of Counseling Services.



## Registration—Day Classes

Students working full time should limit their program to 9 or fewer units. Combinations of work and school should be carefully discussed with the counselor/advisor.

Auditing is not permitted in any class. No person will be allowed to attend a class unless he or she is registered in that section.

A program of 12 units or more is considered a full-time load for Financial Aid, Veterans Benefits, Social Security Benefits and other benefits which are dependent upon student status.

### Health Service Fee

All day students are required to pay nominal Health Services and Insurance fees each semester. This fee pays for accident insurance coverage for students and for the services of the Health Center. (This fee is not refundable.)

### Program Changes

No changes of program will be permitted during the period of registration prior to the beginning of classes.

A program once entered by signing up for any given set of classes may not be changed unless a properly completed add/drop slip is obtained from the student's counselor/advisor, and the student completes the prescribed change-of-program procedure.

A student may not add a new semester-length class after the designated date indicated in the official college calendar. A student may add a short course no later than the third class meeting. Please see your counselor/advisor for assistance.

Students may withdraw from a semester-length course, whether passing or failing, at any time through Friday of the second census week and receive a 'W' grade. Students may withdraw from a short course, whether passing or failing, at any time during the first half of the course and receive a 'W' grade. After these dates, a student will receive an 'F' grade if failing or a 'W' grade if passing, as determined by instructor at the time of withdrawal. Class withdrawals will not be authorized after the start of final examinations. Students failing to follow established withdrawal procedures



may be assigned an 'F' grade by the instructor. For further information concerning program changes consult the Class Schedule.

## Fees—Refunds

### Fees:

All day students are required to pay a health service fee. (See page 39).

Foreign Students, out-of-state residents and, under some circumstances, California residents are required to pay a non-resident tuition of \$56.36 per unit. (See page 38—sections on Foreign Students and Residence Requirements for Admission.)

Certain courses have fees covering special supplies, services or equipment.

### Refunds:

Tuition payments shall be refundable in whole or in part in accordance with the following guidelines:

1. A student shall be entitled to a full refund if tuition has been collected in error.

2. A student who cancels his/her registration prior to the beginning of classes or who officially withdraws from the College prior to Monday of the fourth week of any semester shall be eligible for a full refund less a \$35 processing fee.

3. A student who officially reduces his/her program prior to Monday of the fourth week of any semester shall be eligible for a prorated refund.

4. A student who officially withdraws from the College or who reduces his/her program on or after Monday of the fourth week of any semester shall not be eligible for a refund. Exceptions may be authorized by the Dean of Student Services in cases of unique or extraordinary circumstances beyond the student's control.

5. A student who officially withdraws from summer session courses, or from courses which start at times other than the beginning of the semester, shall be eligible for a full refund if withdrawal is completed prior to Monday of the second week. Thereafter, the student shall not be eligible for a refund except as may be authorized by the Dean of Student Services in cases of unique or extraordinary circumstances beyond the student's control.



# Grades and Scholarships Academic Policy

*Student Drama Production  
See story on following page.*





## FINE AND PERFORMING ARTS

Three Chinese gods search the earth for one good person who is deserving of riches. Their experiment in generosity becomes the history of *The Good Woman of Setzuan*, one of the six plays staged during the '79-80 season by the CSM drama department. Brigette Warger, who played the lead role, echoed the feelings of many drama students when she said that being involved in a theater production is "demanding, but very fulfilling."

Productions, ranging from serious drama to full scale musicals to high comedy, offer students diverse opportunities to test their abilities. Courses in stagecraft and lighting expose students to technical skills which are applied in actual production and courses in mime and chamber theatre help students polish up their acting skills. During the summer a children's theater class creates a lively production which travels to various San Mateo County locations to give performances to young children.

In addition to drama, the Fine and Performing Arts Division offers several musical outlets for student talent. Well-known to Bay Area audiences are the

Masterworks Chorale, a 170 voice choir which draws well over 1000 people to its operatic and choral performances, and the CSM jazz band which continues to bring home awards from state competitions. Additionally, several fine performances are given each year by the San Mateo County Symphony Orchestra, Symphonic Band, the College of San Mateo Accapella Choir, and the College Chorale.

Students enrolled in painting, drawing, etching, photography, stained glass, glass blowing and sculpture courses are often afforded opportunities to exhibit their works in the library gallery, in the bookstore, and in the foyer of the theater. Students in the very active Ceramics Club display their work in shows, both on and off campus, and through sponsorship of an annual ceramics throwing competition.

A variety of "hands'on" learning situations exist for students enrolled in radio and TV broadcasting courses. Through actual on-the-air broadcasts from the campus stations, KCSM-FM and KCSM-TV, learn first hand about such fields as broadcast announcing, writing for radio and TV, broadcast engineering, and radio and TV production.



ADMISSIONS AND REGISTRATION  
COLLEGE OF SAN MATEO  
1700 W. HILLSDALE BLVD.  
SAN MATEO, CALIFORNIA 94402

## Units Work and Credit

A "unit" of college credit normally represents one hour weekly of lecture or 3 hours of laboratory, or similar scheduled activity, during one semester.

## Grades and Grade Points

Once a subject has been made a part of a student's program of attendance, the record for the subject will be reported to the Office of Admissions and Records by one of the following symbols:

|                          |                         |
|--------------------------|-------------------------|
| A—Excellent              | 4 grade points per unit |
| B—Above average          | 3 grade points per unit |
| C—Average                | 2 grade points per unit |
| D—Passing; below average | 1 grade point per unit  |
| *CR—Credit               | 0 grade points per unit |
| *NC—No credit            | 0 grade points per unit |
| F—Failed                 | 0 grade points per unit |
| Inc—Incomplete           | 0 grade points per unit |
| W—Withdrawn              | 0 grade points per unit |

*\*Used in courses in which grades of "credit" or "no-credit" are given. The units for credit count as units completed. No-credit means the student is not charged with units attempted and is not credited with units completed.*

A grade of "Incomplete" may be given in case of absence from required examinations, or in case of circumstances which warrant granting the student additional time in which to complete the work of the course. A student reported "Inc." in any subject must remove the deficiency by the end of the next semester. Additional time may be provided upon approval of the instructor and the Director of Admissions and Records; however, the extension of time may not exceed one calendar year from the date of issuance of the "Inc." The units for "Inc." grade are not charged as units attempted and do not enter into the computation of grade-point average.

A grade of "W" (Withdrawn from class) indicates that the subject has been canceled from the students study list. No credit can be counted in subjects for which a "W" is recorded. Please see section on program changes (page 39). Withdrawal from class will not be authorized once final examinations have begun.

The GPA (grade point average) is determined by dividing the total number of grade points earned by the total number of units attempted. (Please see page 45 under "Academic Policies.")

# Grades and Scholarship

## Final Examinations

Final examinations are required and will be given in accordance with the final examination schedule. The final examination schedule is printed in the class schedule so that students may plan their programs to avoid conflicts or an extensive load.

## Grade Reports

A student is held responsible for his own academic progress. Grade reports are available to each student at mid-semester. Following final examinations at the end of the semester, the student is sent the report of his final grades, which serve as the basis for computing the student's standing.

## Transcripts

Official transcripts will be sent to employers, colleges and other institutions upon written request by the student. Only courses taken at College of San Mateo will appear on the transcript. Transcripts from high school and other colleges will not be forwarded.

Each student is entitled to two free transcripts. Additional copies will cost \$1 each.

## Scholarship Honors

College of San Mateo is affiliated with the California Community College Honor Scholarship Society, Alpha Gamma Sigma. The local chapter is the Eta Chapter. Students carrying 12 units or more of graded classes in a semester and who achieve a GPA of 3.30 or higher in their semester course work will be recognized at end of the semester by inclusion on the Dean's List. Permanent Membership in Alpha Gamma Sigma is awarded upon graduation if the student has maintained a cumulative GPA of 3.5 or higher for all recognized college work.

## Honors at Graduation

Honors are awarded to students at graduation based upon cumulative GPA as follows:

|           |                             |
|-----------|-----------------------------|
| 3.30—3.49 | Graduation with Honors      |
| 3.50—4.00 | Graduation with High Honors |



ADMISSIONS AND REGISTRATION  
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## Academic Policy

### Grade-Point Deficiency

The Academic Standards Policy of College of San Mateo is based on a cumulative grade-point average of "C," the minimum standard of progress toward graduation or transfer.

All units and grade points are on a cumulative basis. At all times, a student must maintain a cumulative grade-point total that is double the total units undertaken (C average). (Example: If a student undertakes 12 units in one semester and 15 units in a second semester, the cumulative units are 27, requiring a grade-point total of 54.)

Any grade-point total less than twice the attempted units is regarded as deficient.

### Probation

A student will be placed on probation under the following criteria:

1) **Academic Probation based on grade point deficiency**

His/her grade point deficiency amounts to 12 or more grade points.

OR

2) **Probation based on failure to maintain satisfactory progress**

He/she is enrolled in more than 9 units, and does not receive passing grades in at least 60% of those units in which he/she was enrolled on or after Monday of the fourth week of the semester. (Note: Passing grades—A, B, C, D, Cr; Unsatisfactory grades—W, F, Ncr, Inc.)

These two probationary criteria will be applied in such a manner that a student may be placed on probation under either or both systems and subsequently be dismissed under either or both systems. The satisfactory progress standard will not be applicable, however, if the student completes the official Leave of Absence Procedure. (See page 49.)

A probationary student may petition the Standards Committee for removal of probationary status if it has resulted from unusual circumstances beyond the student's control.

### Dismissal

A student on probation who incurs a further deficiency in grade points or who fails to maintain satisfactory progress as defined above, will be dismissed and

must ordinarily remain out of College of San Mateo, day and evening classes, for one semester before petitioning the Standards Committee for reinstatement.

A dismissed student may present a written appeal to the Standards Committee requesting immediate reinstatement if dismissal has resulted from unusual circumstances. A registered student who has submitted such an appeal should remain in classes until the decision of the Standards Committee is made.

### Academic Renewal Policy

A maximum of two semesters (or three quarters) and one summer intersession of work which is substandard, that is less than 2.0 grade point average, and not reflective of the student's present scholastic level of performance may be alleviated and disregarded in the computation of grade point averages under the following conditions:

1. A period of at least three years must have elapsed since the work to be alleviated was completed.
2. Students seeking alleviation must have completed nine (9) units of work with a 3.5 cumulative grade point average, or fifteen (15) units with a 3.0 cumulative grade point average, or twenty-one (21) units with a 2.5 cumulative grade point average, or twenty-four (24) units with a cumulative 2.0 grade point average since the work to be alleviated was completed.
3. A semester or quarter is defined as all work attempted during a single academic term. The terms need not be consecutive.
4. The substandard work to be alleviated may have been completed at any college or university. However, the work upon which the application for alleviation is based must be completed at College of San Mateo.

It should be noted that the Academic Renewal Policy will be applied only when alleviation of prior work is necessary to qualify a student for admission to a program, for transfer to another institution, for completion of a certificate program, or for graduation from the college.

Determination of the applicability of this policy will be made only following formal application to the Office of Admissions and Records. When academic work is alleviated, the permanent record shall be appropriately annotated in a manner to insure that all entries are legible and that a true and complete record is maintained.

## Attendance Regulations

Regular attendance in a class and laboratory sessions is an obligation assumed by every student at the time of registration. By being absent from class, the student misses both the content of the particular session and the continuity of the course as developed in a single period of work. When a student's failure to attend class places her/his success in jeopardy, the instructor may drop the student from class.

In all cases it is the instructor's prerogative to determine when absences are excessive. An instructor has the right to drop a student from class when such absences jeopardize the student's opportunity to successfully complete the class work or to benefit from the instruction. A guideline used by many instructors in that excessive absence is represented by twice the number of hours the class meets in one week for semester-long classes and one-ninth of scheduled meetings in classes which meet for less than a full semester.

Absence means non-attendance, and includes non-attendance for illness or personal emergency. Absences due to a student's participation in a school-sponsored activity should be considered as "excused" absences, but it is the student's responsibility to notify the instructor in advance of the absence, and the student is responsible for all work missed. It is noted again that it is the instructor's prerogative to determine when such absences are excessive.

Any student dropped from a class because of this regulation may appeal in writing to the Attendance Committee within five school calendar days of such drop if there are extenuating circumstances. A student making such an appeal may, with the permission of the instructor, remain in class until the decision of the Attendance Committee is reached. The Attendance Committee will make a recommendation to the instructor after considering such an appeal.

## Open Enrollment

Every course offered at College of San Mateo (unless specifically exempted by legal statute) is open for enrollment and participation by any person who has been admitted to the College and who meets the prerequisites of the course provided space is available.

## Transfer Students

A transfer student who enters with a deficiency of 12 or more grade points will be dismissed upon incurring a grade-point deficiency in any subsequent semester. However, a transfer student who has not increased the total deficiency after admission to College of San

Mateo may petition the Standards Committee for permission to continue in college. A registered student who has submitted an appeal should remain in classes until the committee has reached a decision.

## Credit by Examination

A regularly enrolled student may be permitted to obtain credit for courses if he/she is especially qualified through previous training or instruction and can demonstrate such qualifications by successfully completing an examination approved by the appropriate division. (Credit will not be allowed for a course for which credit has been previously granted or for which credit has been earned in a more advanced course in the same sequence.) A student may earn up to 12 units by credit by examination, which will be applied toward the A.A./A.S. degree and graduation residency requirements. Units earned by examination will NOT be counted for financial aid purposes. Credit by examination may be earned through: (1) Advanced placement examinations and (CLEP), (2) Credit by challenge, and (3) Credit by certificate/license.

A student may challenge a course for credit by examination only one time. A challenge examination may not be used in order to improve a grade already received for a course.

## Academic Review Committee

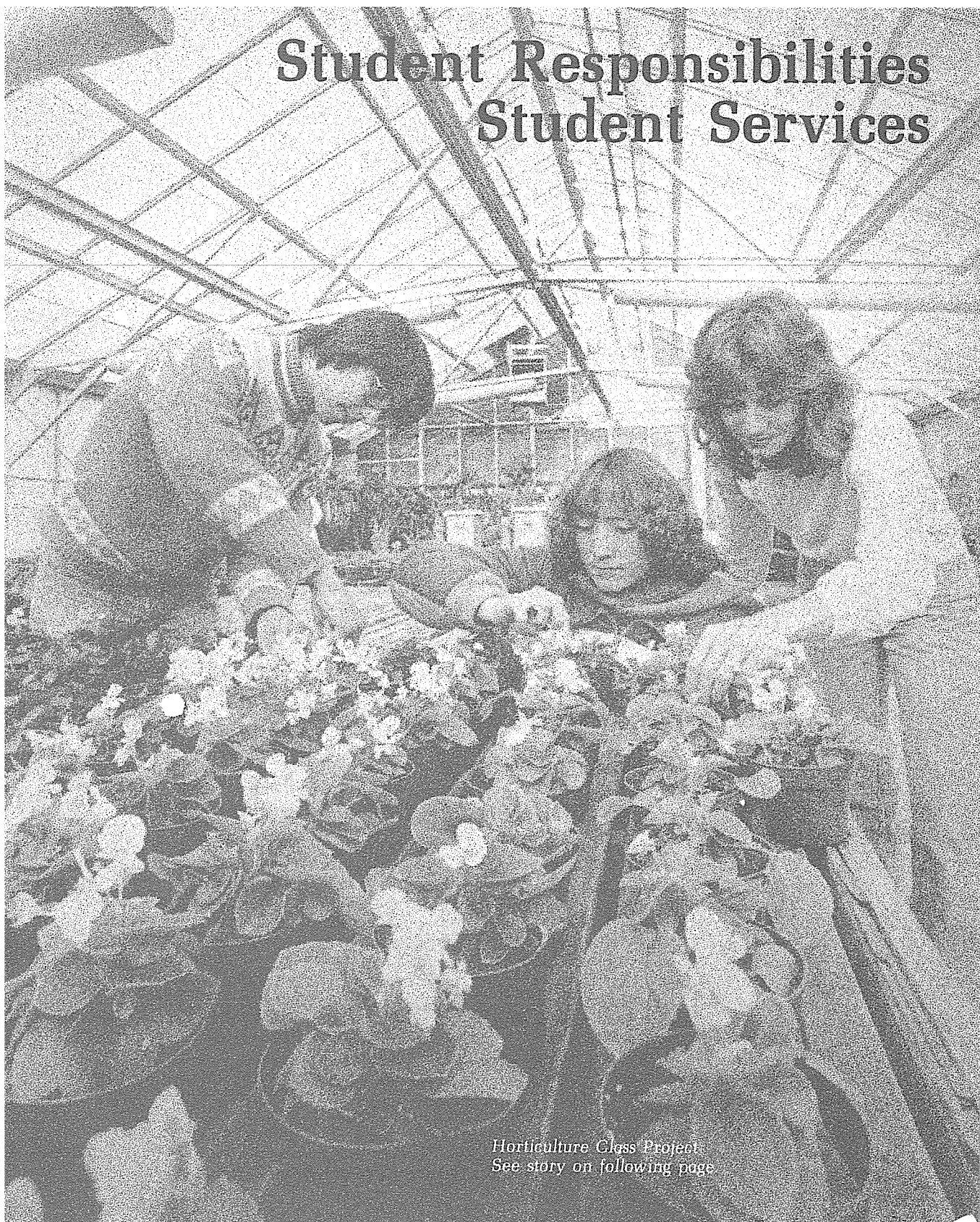
The Academic Review Committee considers requests for waivers and/or exceptions with respect to academic policies. Inquiries should be directed to the Director of Admissions and Records.

## Repeated Course Policy

A student who has received a grade of D, F, or Inc. in a course taken at a college of the San Mateo County Community College District may, with authorization, repeat the course at College of San Mateo up to a maximum of four times. On petition to the Director of Admissions and Records, the student may have the grade of the repeated course used in computation of the grade-point average. Course repetition completed at colleges of the San Mateo County Community College District will be honored; students may apply for such consideration to the Director of Admissions and Records. In no case will the unit value of a course be counted more than once. Courses in which the student has received grades other than those specified above are not subject to the provisions of the policy.



# Student Responsibilities Student Services



*Horticulture Class Project  
See story on following page*



## HEALTH AND SERVICE CAREERS

The CSM greenhouse is one of the busiest places on campus for several months before horticulture students stage their annual plant sale in December. In the well-maintained facility students sow seeds in flats, transplant seedlings into larger containers, fertilize the soil, and attempt to provide each plant with just the right amount of water and light.

As the three-day event draws near, there is much anticipation. Each morning hundreds of local people arrive to take advantage of this "classroom in action" project. It's a great time for both buyers and sellers. Plant enthusiasts scoop up armloads of hanging baskets, houseplants, poinsettias, herbs, and shrubs, all at bargain prices. Students, many of whom hope to eventually have nurseries of their own, learn first-hand about the running of such a business.

The plant sale is a valuable extension of classroom lecture and labs according to Gail Eggleston, president of the campus Horticulture Club. "It gives us an opportunity to use what we have learned to help others. When a customer has questions about names and cultures of various plants and how to care for them, it gives us a chance to use what we've learned in class."

Financially they do well enough each year to pro-

vide six scholarships for horticulture students continuing their studies, either at CSM or four-year colleges and universities.

Students in a related field, floristry, put their classroom knowledge to the test in their own competitive floral design show, held on campus in late spring. In addition, these students compete in off-campus design shows and provide floral arrangements for special campus events such as faculty teas and graduations.

This practical "hands on" approach to learning is particularly suited to the needs of students in programs within the Health and Service Careers Division. Cosmetology students, for example, compete in local hair design shows and test their skills at working with customers by providing, on a regular basis, free hair care for senior citizens and rehabilitation patients. Future dental assistants bring patients to campus for x-rays and plaque control and nursing students gain experience through work in hospitals and clinics.

Among non-traditional learning experiences afforded to Administration of Justice students are off-campus classes in firearms, baton training, and the use of mace. Fire science students gain much of their knowledge by working directly with fire department personnel in the field.

## Student Responsibilities

### Conduct

The principle of personal honor is the basis for student conduct. The honor system rests on the sincere belief that the college student is mature and self-respecting, and can be relied upon to act as a responsible and ethical member of society. Each individual has the obligation to observe the college code of rules and regulations.

Social or other functions using the name of the College are thereby identified as college functions and become subject to the same standards of conduct and of supervision, whether conducted on or off the campus.

Social or other functions for which no college staff member is listed as a sponsor will not be considered school functions. Further, no off-campus organizations may use the name or imply college sponsorship in any publicity or other information.

Any student may be suspended and/or recommended for expulsion if his/her actions on campus are disruptive of orderly and peaceful conduct of the College or are in violation of rules and regulations. In case of disciplinary action, the student will have access to established appeals procedures.

### Student Grievances and Appeals

Students are encouraged to pursue their academic studies and become involved in other sponsored activities that promote their intellectual growth and personal development. The College is committed to the concept that, in the pursuit of these ends, the student should be free of unfair and improper actions on the part of any member of the academic community. If, at any time, a student feels that he/she has been subject to unjust actions, or denied his/her rights, redress can be sought through the filing of an appeal or grievance. Detailed information is provided in the **Student Guide**, which is available at the Student Activity Office. For further information concerning any aspect of student grievances or rights of appeal, students should contact the Office of the Dean of Student Services.

### Fines

Fines are assessed for failure to comply promptly with library and other campus regulations, and students are required to pay for careless or unnecessary

damage to College property. Students who are delinquent in their financial obligations to the college may not receive grades, reports or other records of their work until such delinquencies have been adjusted to the satisfaction of the college authorities.

### Secret Organizations

Sororities and fraternities and other secret organizations are banned on community college campuses under the Education Code of the State of California.

### Extended Absence

An absence of less than one week need not be reported to the College.

Students who will be absent from any class or classes for one week or longer for any health reason should request notification to instructors by the Student Health Center.

Students who will be absent from any class or classes for one week or longer for other personal emergencies should request notification to instructors by the Director of Counseling Services. (Please see Attendance Regulations, page 46).

If a medical or personal emergency requires absence of more than one week, the student should consult with his/her instructors and counselor/advisor regarding the advisability of continuing in classes.

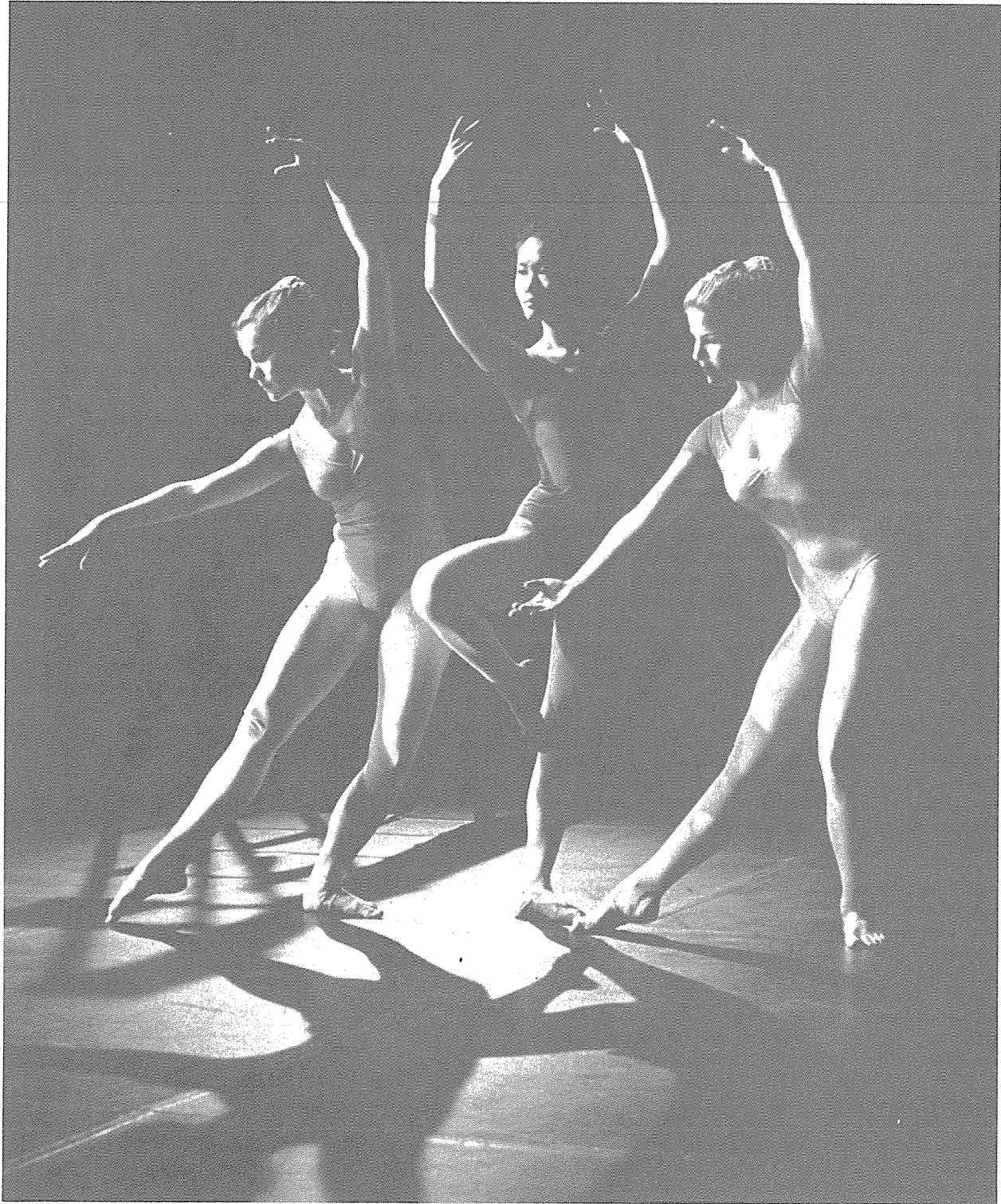
### Withdrawal From College

Students who must withdraw from all of their day classes after registration must obtain an Application for Permanent Leave of Absence from their assigned counselor/advisor. Part-time students (taking nine units or less) may obtain this petition from the Drop-In Advisor, Bldg. 1-201. The completed form must be returned within five college days to the Student Services Office, Building 1-207. Failure to comply with this procedure may result in grades of "F." (See "Program Changes" on page 39.)

### Withdrawal from Individual Classes

There are established procedures for withdrawing from a portion of your college program. (See "Program Changes" on page 39.)







## Student Services

### STUDENT SERVICES AND ADMINISTRATIVE AFFAIRS

**Dean of Student Services**  
Allan R. Brown

**Director of Admissions and Records**  
Herbert R. Warne

**Director of College Readiness Program/  
EOPS Multicultural Center**  
Jackman LeBlanc

**Director of Counseling Services**  
Aline Fountain

**Director of Special Programs and Services**  
Philip D. Morse

**Assistant Registrar**  
Edith N. Hopkins

**Career Development Center**  
Carol Heitz

**Coordinator of Re-entry Program**  
Marcia Mahood

**Coordinator of Security**  
Harold B. Bogan

**Coordinator of Student Activities**  
Stephen Robison

**Coordinator of Veteran Affairs**  
Steven N. Morehouse

**Enabler for Physically Handicapped Students**  
Jacqueline Rose

**Financial Aid Officer**  
Leatha E. Webster

**Foreign Student Advisor**  
Gerald J. Frasseti

**Health Services**  
Leah Tarleton

**Permanent Resident Student Advisor**  
(Immigrant students)  
Henry Cordes

**Psychological Services**  
Anita Fisher  
Noel W. Keys

**Speech Pathologist**  
Mary Herman

**Student Center**  
Bookstore Manager—Andra Morgan  
Cafeteria Manager—Esther Rores

**Student Placement Interviewer**  
Glenna Lombardi

### ACADEMIC ADVISORS

**Administration of Justice**  
Kern Richmond

**Aeronautics**  
Dale W. Blust  
H. Sanford Gum

**Architecture**  
Ernest L. Multhaup

**Art**  
(To Be Named)

**Business Administration**  
Daniel Berry  
John Cron

**Business**  
John Cron  
Tom George  
Marcia A. Mahood  
Rosemary Piserchio  
Elizabeth Wittwer

**College Readiness Program/  
EOPS Multicultural Center**  
Adrian Orozco  
Debbie Upshaw  
Yoneo Yoshimura

**Consumer Arts and Sciences**  
Amy E. Ireson

**Cosmetology**

Jo Ann C. Rock

**Data Processing**

Douglas B. Crawford

**Dental Assisting**

Elizabeth Witzel

**Drafting Technology**

Dean Chowenhill

H. Sanford Gum

Clois A. McClure

**Education**

Eric Gattmann

**Electronics Technology**

George Angerbauer

George Bramlett

**Engineering**

Douglas B. Crawford

Ernest L. Multhaup

**Fire Science**

Kern Richmond

**General Education**

*(Liberal Arts, General Education, No Major Program, Special Program, Undecided Major Program, Career Specialists)*

J. Kyle Clinkscapes

Eric Gattmann

Carol A. Heitz

Robert S. Howe

Alan A. Hynding

Carolyn Ramsey

Carolyn Silva

**Horticulture**

Jo Ann C. Rock

**Language Arts**

*(Dramatics, Radio, Telecommunications, Speech, English, Foreign Languages, Journalism)*

Dan Odum

**Life Sciences**

Mary Jane Baker

J. Kyle Clinkscapes

Roland Fark

**Manufacturing Technology**

Dean Chowenhill

**Mathematics**

Douglas B. Crawford

Ernest L. Multhaup

**Music**

Dan Odum

**Nursing**

Mary Jane Baker

Frances Henderson

**Physical Education**

Carol A. Heitz

Carolyn Silva

**Physical Sciences**

J. Kyle Clinkscapes

William Glen

Michael Chriss

**Re-Entry Program**

Marcia Mahood

**Real Estate**

Thomas George

**Social Sciences**

Eric Gattmann

Anita Fisher

Alan A. Hynding

Musonda Mantabe

Richard S. Phipps

Kern Richmond

**Technical Illustration, Machine Tool Technology, Welding Technology**

Dean Chowenhill

**Veteran Affairs**

Steven N. Morehouse

**Program Planning and Counseling**

Certain faculty members are officially designated as counselor/advisors. Each regular student will be assigned a counselor/advisor who is a specialist in a field. Counselors are available by appointment during the registration period and throughout the academic year to consult with students. Counselor/advisors assist students in planning programs of study; they must approve the final program for each semester and must be consulted about changes. However, each student is responsible for fulfilling his/her own graduation and/or transfer requirements.

The Office of Student Services will make appointments for interviews with counselor/advisors for the purpose of assisting students in the selection of a course of study with relation to a career or profession and to complete registration.

All faculty members are an important part of the College's advising program. Students should feel free to approach counselor/advisors and other faculty members for information. Personal counseling is available to all registered students through their counselor/advisors and/or through psychologist/counselors with specialized personal counseling skills. The staff will attempt to help students develop their full potential and obtain maximum benefit from their college experience. When appropriate, students may be referred to other offices for specialized assistance. Appointments for special services may be made in person, by telephone, through a counselor/advisor, or through the Student Health Center.

## Drop-In Counseling/ Advising

The Drop-In Counseling/Advising Office is located in Building 1, Room 201 and is available to part-time day and evening students and members of the community who wish assistance with program planning, counseling, and academic advising.

## Health Service

The Health Center is staffed by a public health nurse and a receptionist. Services provided include first aid, nursing evaluation, health counseling, rest, referral to physicians, clinics or community agencies, arrangement for emergency transportation, hearing tests, vision screening tests, reading of TB skin tests, blood pressure reading, etc. Medical insurance application, referral and claim forms, where applicable, are available.

Absences of 5 days to 2 weeks for medical reasons should be reported to the Health Center by the student so instructors can be notified.

All entering students are required to complete a health card as part of the application. It is important that the information be completed in case of an on-campus emergency.

An ill or injured person who is unable to communicate will be sent to the emergency room at Chope Community Hospital if the student's health card does not specify a physician or other hospital, and if the family cannot be reached.

## Student Health Insurance

The college provides limited accident and health insurance coverage to its students in two parts. Every student enrolled is required to pay nominal fees each semester. In addition to the health services described above, the fees provide coverage for emergency sickness and/or accident *when the student is on campus or at a school-sponsored event.*

In addition, the College has endorsed a voluntary health insurance program which may be purchased by students who are not covered by their own or their parents' policies. The voluntary policy provides for 24 hours, around-the-clock protection at an advantageous group rate. Detailed information is available in the Student Health Center.

## Testing

The Office of Student Services and the Career Development Center maintain a service in personal and vocational testing which is available to all registered students. Through this service, students may receive assistance in assessing their aptitudes and interests so



that they may better plan their educational and vocational goals.

Special personalized testing is also available through the series of classes. Many of these Career/Personal Development classes are designed as 6 and 8-week courses which allow for flexible entry and exit. (See course descriptions on page 160). Included in these classes are thorough explanations and interpretations of tests taken at entrance and additional tests to help the student appraise aptitudes, interests, personal adjustment, and special abilities. These tests are useful to the student to verify or make effective educational and vocational plans.

## Career Development Center

The Career Development Center offers a variety of services and programs to students and members of the community designed to assist individuals in setting career goals. Several short and semester-long courses are offered which assist students in making career choices. Descriptions of individualized and group guidance class offerings are found in the Description of Courses section of this catalog under the heading Career/Personal Development.

Students and members of the community are encouraged to visit the Career Development Center, located in the Student Center. The Center is open daily from 8:00 a.m. to 4:30 p.m., and several evenings per week. For information call 574-6571.

## Student Placement Services

The College maintains a placement office to assist students currently enrolled in good standing to secure part-time employment. This service is also available to graduating and former students who wish to secure full-time employment.

## Financial Aid

The financial aid program at College of San Mateo is dedicated to the concept that no individual should be denied an education solely for financial reasons. Any student applying for admission to the College who has a financial need for assistance is urged to apply for aid.

The Financial Aid Office administers a program of grants, loans, and work-study programs which may be awarded to qualified students. We assist and encourage students to apply for California State Scholarships, College Opportunity Grants, Vocational Training Grants, and all other state and local awards. Students

must be enrolled in a minimum of 12 units to be eligible.

All awards are based on need; the determination of need is based upon a careful analysis of family income and assets, liabilities, number of children, medical expenses, etc. While the determination of the student's financial need is geared mainly to the student's educational and vocational career plans, it is recognized that frequently the student may have personal considerations that play an important part in this determination. Each application is evaluated on an individual basis with all special and extenuating circumstances taken into consideration.

Students are advised that determination of eligibility is approximately an eight-week process from the time the application is determined complete. Students are strongly encouraged to observe application deadlines. Applications received after the established deadline will be considered subject to the availability of funds.

For detailed information regarding specific assistance programs, students should see the Financial Aid Officer, in the Administration Building, second floor, Room 221. Small emergency loan applications are available through the office of the Director of Counseling Services, in the Administration Building.

## Scholarships

The Foundation for San Mateo County Community College District administers funds from private sources which are available to students as scholarships, loans and grants.

Scholarship applications are available through the office of the Director of Special Programs and Services in the Administration Building.

## College Readiness Program/ EOPS Multicultural Center

The CRP/EOPS Multicultural Center is a program designed primarily to assist Third World Students in their pursuits of higher education. This program provides supportive counseling services (academic, financial, personal, vocational and tutorial), as well as cultural enrichment.

The essential requirement for participation is that each student have his/her academic folder on file at the CRP office, and receive counseling from the counselors assigned to the program.

Counselors are multi-cultural people, and can easily identify with and understand their counselees. Counselors attempt to build relationships which are warm and real.

The offices are located in Building 20, Rooms 107-113. All personnel can be contacted at 574-6154.

## Learning Center

The Learning Center is designed to help students succeed academically, operating on the principle that those who come to College of San Mateo wanting to learn should be assisted in that endeavor. Students may be referred by teachers and counselors, or just drop in. Tutoring is available as needed and as tutors can be provided. Also offered are discussion groups, and programmed learning. Additional information is available by contacting the Learning Center.

## Physically Handicapped Students

Students entering college with physical handicaps who need assistance through tutoring, reader services, mobility help, braille, special parking permits, access to classrooms, orientation to the campus and special arrangements, may contact the Enabler. Pre-enrollment interviews are provided to set up assistance services before the student enrolls in classes.

## Speech Therapy

Professional staff can provide testing, individual and small-group therapy to students who need special assistance with speech and/or related problems. The program is offered in close cooperation with other services on campus relating to students with special needs.

## Veterans' Affairs

The Office of Veterans' Affairs at College of San Mateo was established by a Federal grant to provide veterans with a wide variety of services necessary to successfully complete an academic career. Eligible veterans have 10 years from the date of separation from active duty to use their educational benefits.

The Office of Veterans' Affairs is located in the Administration Building (Bldg. 1). The office is staffed Monday through Friday from 8:00 a.m. to 4:30 p.m., and several evenings per week.

To initiate VA benefits, report to the VA Clerk (Bldg. 1) and bring: (1) two copies of your DD214 (separation papers); (2) one copy of your marriage/divorce certificate; and (3) copies of birth certificates of children.

Veterans who have previously attended college must have official copies of college transcripts on file in the Office of Admissions and Records. For further information, contact the Office of Veterans' Affairs, 574-6193.

## Re-Entry Program

The Re-Entry program is designed for individuals whose education has been postponed or interrupted. Counseling and tutorial assistance are offered, together with a coordinated instructional program, at hours convenient to those with school-age children.

Tutoring in a wide range of subjects is available for those who need such assistance. Instruction is provided in basic skills such as text reading, paper writing, use of the library, note taking, and test taking. Students desiring further information should visit the Re-Entry Information Center, Building 15, Room 165, or call 574-6440.

## Associated Students

The Student Government at College of San Mateo is composed of two major bodies: the Student Senate and the Student Programs Board. The Senate is charged with the responsibility of providing student input into the decision-making process, and of assessing and trying to meet student needs. The Senate is organized along college divisional lines and Senators are elected by students majoring in a specific divisional area, i.e., political science majors vote for the Social Science Division Senator. The following are the Divisions from which Senators are elected and other positions on the ASCSM Student Senate:

President  
Vice-President  
Vice-President for Evening Students

### SENATORS

Business Division  
Fine and Performing Arts Division  
Health and Service Careers Division  
Language Arts Division  
Math/Science Division  
Social Science Division  
Physical Education Division  
Technology Division  
Unclassified Majors  
Part-time Students  
Judicial Council (5)

The Student Programs Board is charged with the responsibility of providing activities and services for the CSM student body. It is organized into ten committees which have responsibility for programming in that specific area:

Contemporary Entertainment Committee  
Performing Arts and Lectures Committee  
Visual Arts Committee  
Outdoor Recreation Committee  
Innovative Programming Committee  
Minority Programming Committee  
Art and Exhibits Committee  
Recreation/Games Area Committee  
Innovative Services Committee  
Women's Programming Committee

## Student Associations

**Student Senate Advisor**  
Philip Morse

**Student Programs Board Advisor**  
(To be Named)

**Judicial Council Advisor**  
(To be Named)

## Organizations

In order to secure the most from college life, a student may participate in one or more of the many clubs organized within the Associated Students. The clubs listed below offer many and diversified opportunities to students for both social and educational contacts. Each club elects its officers and plans its own program for the semester. How successful it becomes depends largely upon the enthusiasm of its membership. Students are advised to contact the sponsors, whose names appear below, for further details about the club or clubs in which they are interested. Additional information may be obtained by contacting the Student Activities Office.

**ALPHA ETA RHO (Aviation)**  
Bruce Walters  
Thomas O'Donnell

**ALPHA GAMMA SIGMA (Honor Society)**  
Al Acena

**AMATEUR RADIO CLUB**  
Donald Beaty

**ASIAN STUDENT UNION**  
Gladys Chaw  
Yoneo Yoshimura

**ASSOCIATION OF TECHNICAL DRAFTSMEN**  
Clois McClure

**BAPTIST STUDENT UNION**  
Andra Morgan

**BULLDOG TRACK CLUB**  
Robert Rush

**CERAMICS CLUB**  
Vince Rascon

**CHESS CLUB**  
Aline Fountain

**ECOLOGY ACTION**  
Greg Davis

**ETA EPSILON**  
(Consumer Arts and Fashion Merchandising)  
Grace Sonner

**HORTICULTURE**  
Alexander Graham

**INTERIOR DESIGN**  
Don Bowman

**INTERNATIONAL CLUB**  
Debbie Upshaw

**INTERVARSITY COLLEGIATE**  
**CHRISTIAN FELLOWSHIP**  
Robert Anderson

**L.D.S.**  
George Angerbauer

**ORGANIZATION OF ARAB STUDENTS**  
Zelte Crawford

**SAMAHAN (Filipino Club)**  
Yoneo Yoshimura

**SIERRA CLUB**  
Cliff Denny

**SKI CLUB**  
(To be Named)

## Student Activities Office

The Student Activities Office is located at the north end of the Student Center. It is a drop-in type of office and is a place you should come if you have a question regarding any aspect of the College. If the staff can't assist you directly, they will refer you to someone who can. A number of services are provided for students by the Student Activities Office. Among them are:



### Housing

Dormitories and other types of college-sponsored housing are not available at College of San Mateo. The Student Activities Office maintains an up-to-date listing of housing available in the community. The majority of listings are rooms in private homes, but apartments and houses are sometimes available.

### Student Government and Clubs Information

Information concerning any aspect of student government, student activities or clubs may be obtained in the Student Activities Office. This office provides all of these groups with duplicating and publicity services. The Student Activities Office is also responsible for the supervision of the Recreation/Games Room and the Student Center Lounge.

### Travel Information

A reference library concerning aspects of travel from local to international is maintained in the Student Activities Office.

## Publications

The following publications are issued by College of San Mateo.

**The San Matean**—A student newspaper published weekly, serving a two-fold purpose of providing full covering of activities on campus and of giving experience to journalism students.

**Student Guide**—A manual for students containing information about College of San Mateo, the rules, staff, student organizations and services.

**Pendulum**—A student art and literary magazine published each spring, sponsored by the English Division. Each year the "Pendulum" provides a showcase for the talents of the creative writing and art classes, as well as informative and timely articles by other interested students.

**CSM Bulletin**—A mimeographed publication, prepared and distributed by the Activities Office every Wednesday, announcing activities, new events and items of interest to the faculty and students of the College. The deadline for submission of items for publication is 4:30 on the preceding Monday.

**Student Orientation and Self-Help Guide**—An orientation to College of San Mateo distributed by the Office of Student Services. It is designed to assist new students with program planning, campus vocabulary and campus resources, and it includes recommendations to help students in registering for classes.

## Athletics

College of San Mateo offers a full program of athletic activities, both intramural and intercollegiate, de-

signed to benefit all interested students. For men and women students who seek competitive activity but lack sufficient time or training for intercollegiate athletics, the intramural program provides the opportunity to engage in a wide variety of team and individual sports. Participants may receive one-half (½) unit of credit each semester by involvement in two 8-week activities. The intramural program is planned on a year-round basis, and it provides an excellent opportunity to broaden and improve recreational knowledge and skills.

College of San Mateo sponsors intercollegiate sports within the Golden Gate Conference for the benefit of those students interested in team competition. Sports offered are: Baseball, Men's Basketball, Women's Basketball, Men's Cross-Country, Women's Cross-Country, Women's Tennis, Football, Golf, Women's Softball, Men's Track, Women's Track, Wrestling, and Women's Volleyball.

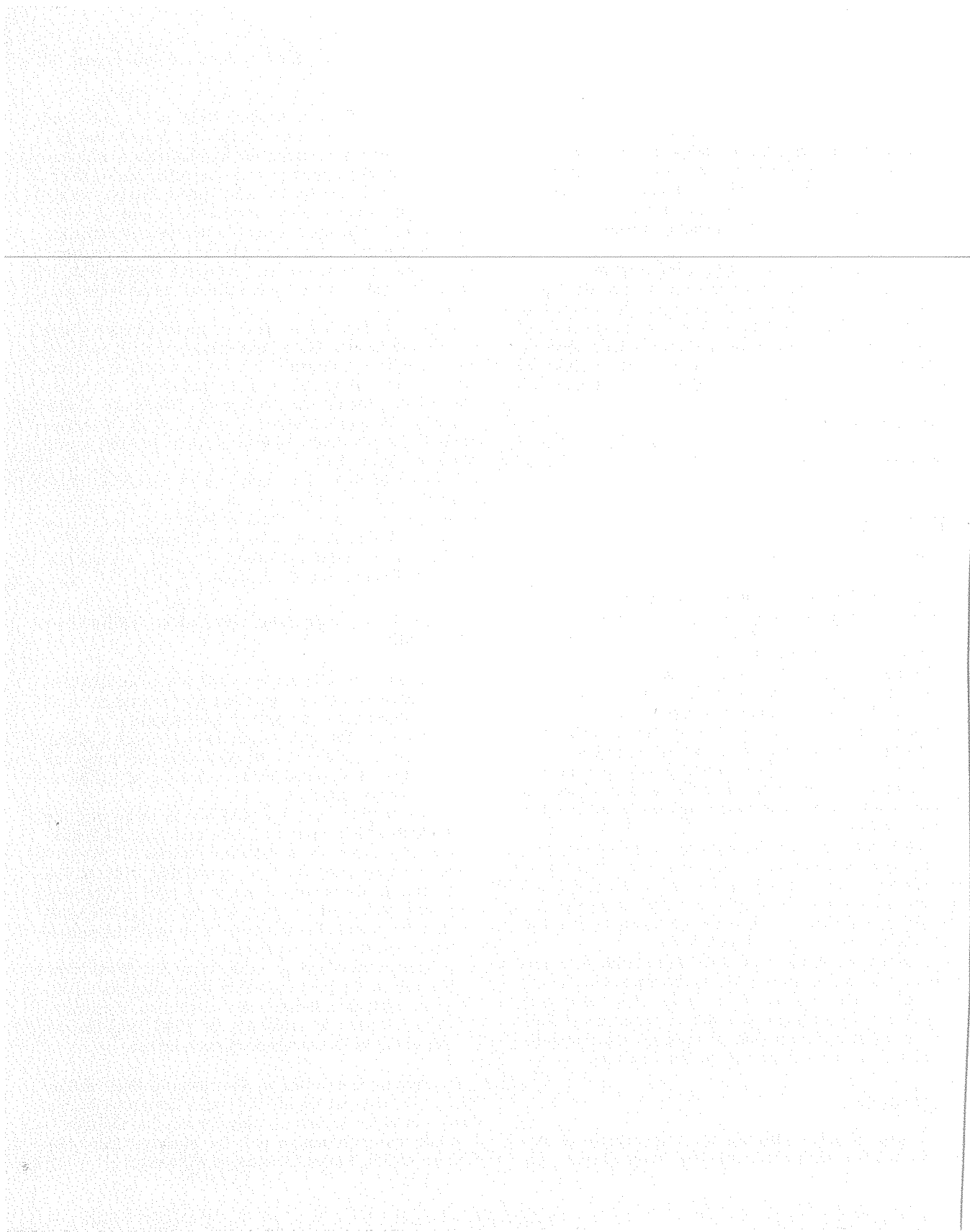
College of San Mateo adheres to California State Athletic Code and Golden Gate Conference eligibility rules and regulations. Final eligibility decisions rest with the Golden Gate Conference Commissioner or the California Community/Junior College Association (CCJCA) Commission on Athletics.

The following basic principles pertain to all matters of eligibility:

1. In order to be eligible to participate, a student/athlete must be actively enrolled in a minimum of 12 units during the competition in the sport.
2. In meeting the unit requirements, courses which have been failed may be repeated, but those that have been completed with a grade of "C" or better may not be repeated.
3. To be eligible for the second season of a sport, the student/athlete must complete and pass 24 semesters/36 quarter units between seasons of competition. These units must be completed *prior* to the beginning of the second season of sport. Units completed and passed during the first season of sport shall be included in the calculation of the 24 semester/36 quarter unit replacement.
4. A student transferring to College of San Mateo who has previously participated in intercollegiate athletics at another post-secondary institution, must complete 12 units in residence at CSM prior to the beginning of the semester of competition.

If a student is enrolled in 12 units at College of San Mateo, he may participate in Varsity Soccer or Men's Tennis at either Cañada College or Skyline College.

Additional information may be obtained from the College of San Mateo Director of Athletics.



# Graduation Requirements



*Forming Class  
the story on following page*



## LANGUAGE ARTS

The entire CSM campus becomes the classroom as eager filmmakers scout for appropriate locations for the films they are producing in the College's filmmaking classes. From concept, through filming and directing, to the final stages of editing and presentation, students, working in production crews, learn the skills required to convey ideas in a visual medium.

Apparently, they learn their lessons well, under the creative direction of instructors Dick Williamson and Joe Price, for both beginning and advanced students have captured awards for their work. All three awards in the 13th annual California Student Media Festival (1979) went to College of San Mateo students and a CSM film was honored as one of the top ten films in the Houston International Film Festival in 1980. Additionally, a number of former students have gone on to earn hard-to-land jobs in the film industry.

Not only do the classes provide firsthand experience in filmmaking, but they also allow students to work closely with one another in a creative endeavor. The greatest benefit, says student Steve McNally, "is working with other people and learning how to deal with them. It's a good feeling to be working on something creative with others."

The campus also serves as a laboratory for other language arts students: those who produce CSM's weekly newspaper, *The San Matean*. Published every Friday, *The San Matean* serves a dual role. It seeks to inform the campus community of news concerning the school and offers journalism students practical newsgathering, writing, and editing experience.

Student writers can also find an outlet to express themselves in CSM's literary magazine, *Pendulum*. Comprised of short stories, poems and other forms of creative writing, the *Pendulum* offers students enrolled in the Journalism 310 class the opportunity to oversee the entire publication process.

The annual Poetry Faire also allows students to exhibit their creative products. Both professional and student poets participate in workshops and readings during the Faire, designed to encourage student-created works and to introduce students to the professional poetry world.

Students in any discipline may seek help from the Reading Lab, Writing Center and tutoring labs administered by the Language Arts Division. Operated on a self-paced basis, the labs help students discover their weak points and strengthen reading and writing skills.



## Graduation Requirements

This section of the Catalog, Pages 61 to 63 contain new course numbers only. For equivalent numbers in the old system, refer to the course descriptions or to the cross reference listing on page 104.

### A.A./A.S. Degree Requirements

Graduation from College of San Mateo with the Associate in Arts or Science degree is based upon the completion of 60 units of lower-division college-level work, including the requirements A through E listed below. An application for the degree must be filed in the Office of the Director of Admissions and Records during the last semester of attendance (refer to calendar for the college year for deadline).

Graduation requirements for an individual student shall be as listed in the College of San Mateo Catalog at the time studies begin. Those requirements may be followed throughout the student's course of study. However, if a break in attendance occurs before graduation, the graduation requirements shall become those listed in the College Catalog which is current at the time studies are resumed.

#### A. Residence

Either 48 units of the 60 units required or the last 12 units must be completed at the College of San Mateo.

#### B. Scholarship

A minimum grade point average of 2.0 in the last 60 units, and a minimum grade point average of 2.0 in courses taken at the College of San Mateo and submitted as part of the 60 units.

#### C. Major

A minimum of 18 units, with a grade point average of 2.0, from a list of courses specified for the major by the division involved. These 18 units are exclusive of any units offered in satisfaction of any other A.A. or A.S. degree requirement.

A division may require more than 18 units for a given major. The additional units may, if appropriate, be used to satisfy other A.A. or A.S. degree requirements.

#### D. General Education

General Education introduces the student to areas of study that develop breadth of outlook and contribute to a balanced educational development. The courses are complementary to, but different in emphasis from, the specialized training one receives for a job, a profession or a particular field of study.

#### 1. AMERICAN HISTORY AND INSTITUTIONS, CALIFORNIA STATE AND LOCAL GOVERNMENT

This requirement may be satisfied in three different ways:

a) by completing either Political Science 200: National, State and Local Government (5 units), or, for foreign students only, Political Science 205: American Society (5 units); or

b) by completing one of the options in each of the groups listed below; or

c) by demonstrating equivalent knowledge through examinations acceptable to the Social Science Division and the Office of Instruction.

Courses used to satisfy this requirement may also be used, if appropriate, to satisfy requirements listed under 5b, Social Sciences.

##### Group 1—American History and Institutions

a. History 201, 202—United States History (6 units), or  
b. Political Science 250, 260, 210, 220, 255 or 215 (3 units), or

c. History 100, 102—Western Civilization (6 units), or

d. History 101, 102—Western Civilization (6 units), or

e. History 201 or 202—plus any one of the following 3-unit history courses:

230 Economic History (3)

280 American Foreign Policy (3)

350 The American West (3)

210 20th Century American History (3)

260 Women in American History (3)

290 The American Labor Movement (3)

360 The South in American History (3)

242 The Afro-American in U.S. History (3)

270 Civil War and Reconstruction (3)

f. History 800—Historical Geography (3), or

g. History 810—American History and Current World Affairs (3)

##### Group 2—California State and Local Government

a. Political Science 310—California State and Local Government (2 units), or

b. Political Science 300—State and Urban Politics (3 units), or

c. History 315—History of San Mateo County (3 units), or

d. History 310—California History (3 units), or

e. Sociology 200—Urban Development (3 units)

f. Social Science 130 to 134—California, an Interdisciplinary Approach to Selected Topics (2-3)

g. Ethnic Studies 101 or Ethnic Studies 102 (3 units)

## 62 Graduation Requirements (continued)

### 2. ENGLISH

Two semester courses (6 units) are required. One of these shall be a composition course (English 800, 801 or 100) and the other shall be selected from the following list. Credit for English 100 may be earned by those students who can demonstrate equivalent knowledge through examinations acceptable to the Language Arts Division and the Office of Instruction. Courses used to satisfy this requirement may be used, if appropriate to satisfy requirements 5c and 5d.

English: 100, 110, 120, 130, 140, 161, 162, 165, 195, 200, 210, \*311, \*312, \*313, \*314, 800, 680, 801, 802, 860, 880.

Literature: 101, 105, 111, 113, 115, 143, 151, 200, 201, 202, 231, 232, 251, 266, 301, 302, 430, 451, 452, 461, 462, 680, 841.

Reading: 802, 803.

Speech: 100, 111, 112, 120, 130, \*811, \*812, 825.

*\*For non-native speakers.*

### 3. HEALTH SCIENCE

Two units of Health Science are required (Health Science 100 (2 units) or two classes selected from Health Science 101-112, 160, 310); however, the requirement may be waived for qualified students who demonstrate equivalent knowledge through an examination acceptable to the Math/Science Division and the Office of Instruction. The requirement may be waived for veterans with one or more years active service.

### 4. PHYSICAL EDUCATION REQUIREMENT

Students must complete two semester-long activity courses in Physical Education (not taken concurrently), unless excused, to complete the requirements for the Associate in Arts or Associate in Science degree.

Note also that, in accordance with policy adopted by the Board of Trustees, the requirement may be waived for students in one of the following categories:

- Graduates of community colleges or other colleges and universities.
- Persons enrolled in Continuing Education classes (i.e., those who complete in such classes at least 60% of the courses taken at this college in fulfillment of A.A./A.S. degree).
- Veterans with one or more years of active service.
- Persons excused for medical reasons.

Students wishing to request a waiver for any reason not specifically provided for above, may petition for consideration through regularly established college procedures. Inquiries should be directed to the Office of Admissions and Records.

### 5. ADDITIONAL REQUIREMENTS

A minimum of 15 units with at least 3 units in each of the following areas, a, b, c, and d is required.

#### a. Natural Science (at least 3 units)

##### PHYSICAL SCIENCE

**Astronomy** 100, 101, 102, 110, 120, 130

**Chemistry** 100, 101-107\*, 210, 220, 224, 225, 231, 232, 250, 260, 410, 420, 890

**Electronics Technology** 100

**Geography** 100

**Geology** 100, 130, 210, 220

**Home Economics** 113

**Meteorology** 100, 110

**Oceanography** 100

**Physical Science** 100

**Physics** 100, 210, 220, 250, 260, 270

**Technology** 100

##### LIFE SCIENCE

**Anthropology** 125

**Biology** 100, 102, 106, 110, 112, 113, 114, 115, 116, 117, 118, 119, 125, 130, 137, 140, 145, 150, 160, 180, 184, 210, 220, 230, 240, 245, 250, 260, 314, 320, 410, 420

**Home Economics** 310

**Horticulture** 311, 312, 320, 340

**Paleontology** 110

*\*For the purpose of this requirement, three one-unit courses from Chemistry 101-107 are considered the equivalent of one course.*

#### b. Social Science (at least 3 units)

**Anthropology** 110, 130, 140, 180, 310

**Biology** 370

**Business** 101, 102

**Economics** 100, 102, 108, 130, 230, 250, 661, 662, 663

**Ethnic Studies** 101, 102, 150, 151, 152, 160, 261, 262, 290, 300, 305, 310, 425, 435, 450, 520, 645

**Geography** 110, 120, 150, 160, 170, 800

**History** 100, 101, 102, 110, 130, 141, 142, 150, 160, 201, 202, 210, 230, 242, 260, 270, 280, 290, 310, 315, 350, 360, 401, 402, 421, 422, 450, 800, 810

**Home Economics** 412

**Labor Studies** 110, 120, 150, 200, 290

**Management** 140

**Political Science** 100, 110, 130, 150, 200, 205, 210, 215, 220, 250, 255, 260, 300, 310, 520, 550

**Psychology** 100, 105, 108, 110, 201, 250, 300, 340, 355, 358, 400, 410, 480

**Social Science** 130-134, 185, 261, 262

**Sociology** 100, 105, 110, 141, 150, 151, 152, 200, 300

#### c. Humanities (at least 3 units)

**Architecture** 100

**Art** 101, 102, 103, 106, 108, 111, 141, 142, 151, 152, 350, 451, 452

**Drama** 101, 102, 140

**English** 110, 120, 130, 140, 802



**Ethnic Studies** 266, 267, 270, 275, 288, 320, 350, 351, 510, 585

**French** 140, 161, 162, 620

**German** 140, 161, 162, 620

**Humanities** 101, 102, 111, 112, 113, 114, 125, 136, 140

**Literature** 101, 105, 111, 113, 115, 143, 151, 200, 201, 202, 231, 232, 251, 266, 301, 302, 430, 451, 452, 841

**Music** 100, 202, 270, 275

**Philosophy** 100, 101, 105, 160, 170, 190, 240, 300, 320, 340, 395

**Spanish** 140, 161, 162, 251, 620

**Speech** 111, 112

**d. Learning Skills (at least 3 units)**

**Accounting** 100, 111

**Art** 461, 462

**Business** 115, 129, 130, 800

**Data Processing** 110, 151, 160, 180

**Drafting Technology** 711, 712

**Economics** 123

**Electronics Technology** 230

**English** 100, 161, 162, 165, 195, 200, 210, 311, 312, 800, 801, 860, 880

**French** 110, 111, 112, 120, 121, 122, 130, 131, 132, 801, 802, 803, 804

**German** 110, 111, 112, 120, 121, 122, 130, 131, 132, 801, 802, 803, 804

**Japanese** 100, 101, 102, 110, 111, 112

**Journalism** 120, 300, 310

**Literature** 461, 462

**Machine Tool Technology** 100

**Mathematics** 105, 110, 111, 112, 115, 119, 120, 121, 125, 130, 151, 152, 162, 200, 210, 219, 220, 241, 242, 260, 261, 262, 263, 270, 275, 414, 415, 416, 417, 811, 812, 813

**Philosophy** 200, 210

**Psychology** 121

**Reading** 802, 803

**Real Estate** 105, 141

**Secretarial Science** 100, 110, 120, 400, 401

**Spanish** 110, 111, 112, 120, 121, 122, 130, 131, 132, 801, 802, 803, 804

**Speech** 100, 120, 130, 811, 812, 825

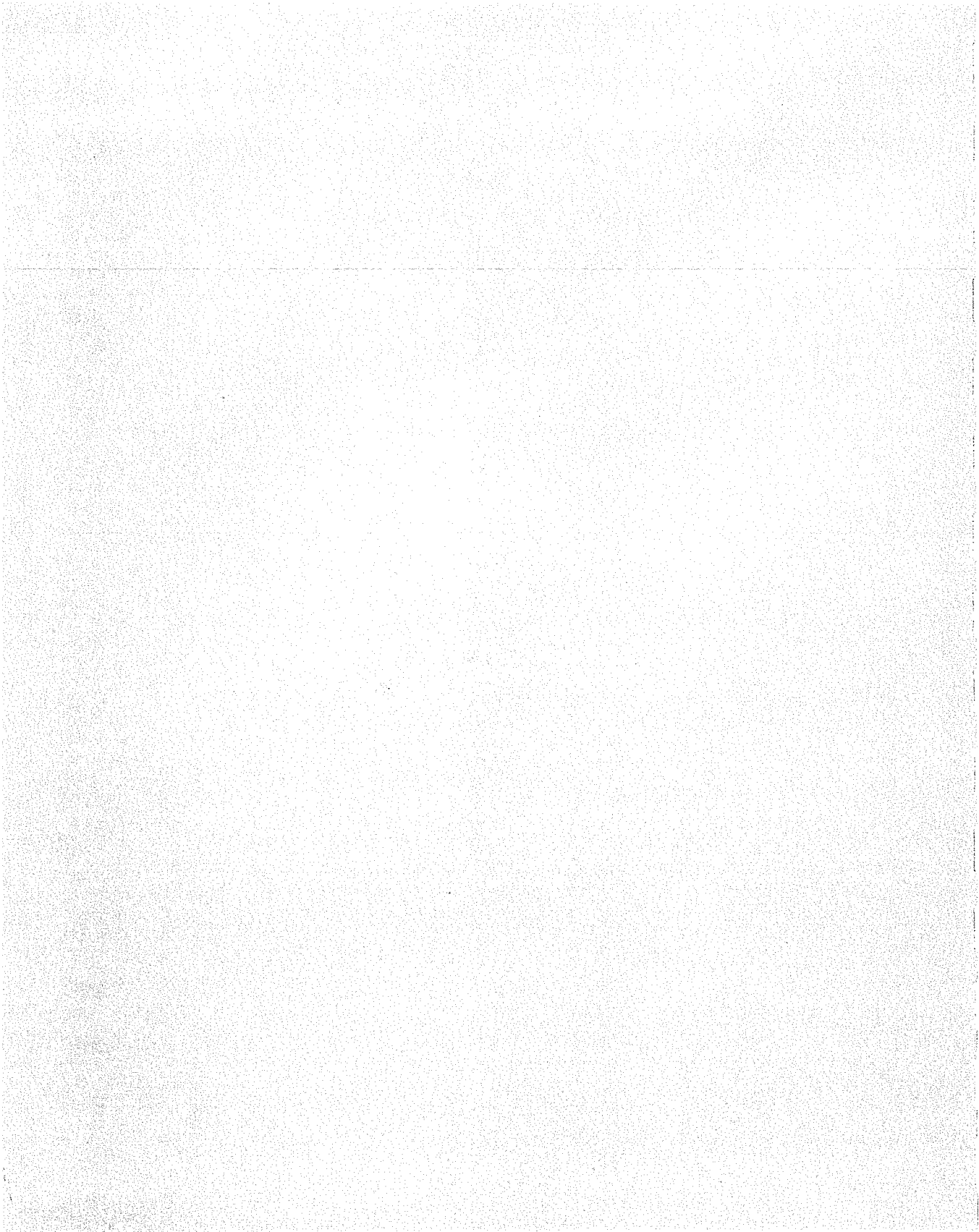
**Telecommunications** 115, 194

**Welding Technology** 100

**E. Electives**

All courses not included in the major requirements or specified above in the General Education requirements are considered electives.





# Program Planning Suggested Curricula



*Architecture Project  
See story on following page.*





## MATH AND SCIENCE

Math and Science students at CSM exhibit their ingenuity in a variety of special group projects throughout the year.

Every June the men and women studying architecture display geodesic domes, space frames, intricate kites, hot air balloons, and other design projects which have provided them with unique experience in their field before they transfer to four-year colleges and universities to complete their education. This year Cal Poly invited CSM architecture students to compete in a design contest challenging them to build 3-man living units. The students will live in them during the Poly Royal Celebration in San Luis Obispo.

Camaraderie fuses these students together as they collaborate on projects requiring the related skills from many fields.

Working as a team last spring, architecture and engineering students joined heads to build a maneuverable canoe out of cumbersome materials—wire and cement. The students combined their skills to produce a canoe of "Ferro Cements" which was at once aesthetically pleasing and structurally sound.

According to Nazarin Saidi, an architecture student, the canoe project allowed both sets of students to learn professional consulting on an informal basis: "In architecture, it's important to work with others. When you work in an architecture firm you often

work with several other architects and several engineers. I learned a lot from the group project," Ms. Saidi comments. "All of us tried to take responsibility and work together."

Not only did the students' enthusiasm and confidence fuel the canoe building project, but it stretched to an intercollegiate race in San Jose in which they tested their vessel, bringing home a plaque recognizing their participation.

As a convenient aid to students in their particular projects, the Math and Science division maintains a math lab, located in Building 16, which is open from 8 a.m. to 10 p.m. Heavily utilized by math students, the center offers personalized assistance and several computerized modules which students may use to sharpen their math skills.

Students in other science fields, such as geology, paleontology, biology, oceanography, and zoology, plan numerous field trips in the course of the year in order to focus their study of the earth's crust and its vulnerable organisms.

Recent biology trips included a review of vertebrate adaption in mammals at the Fleishacker Zoo, a study of intertidal diversity at the Moss Beach Marine Preserve, and a survey of the plant community in the Palo Alto wetlands. Oceanography students spend entire days studying the coastal features of San Mateo County, while geology students trek over the same coastline charting geological features of the area.

## Program Planning and Suggested Curricula

Students enrolling at College of San Mateo should plan a program of studies which will meet their education goals. Their objective may be to transfer to a four-year college or university. Depending on the program they follow, they may also receive an Associate in Arts (or Associate in Science) degree from College of San Mateo. On the other hand, their objective may be to enter an occupational field after becoming qualified through one of numerous Associate-in-Arts/Science degree programs or through one of several certificate programs.

If in the course of their enrollment at College of San Mateo students find it advisable to change their program of studies, they may do so, in conference with their counselors. However, students should be aware that any changes may result in extending the time necessary to fulfill all requirements.

Students have the responsibility for planning their programs.

### Transfer Programs

The student who intends to transfer to a four-year college or university or to another educational institution should consult the catalog of that institution to ascertain requirements for graduation.

College catalogs and occupational information on file in the Career Development Center are accessible to the student. Students may write directly to the registrar or dean of admissions of the college of their choice to obtain catalogs, circulars of information and other data concerning required subjects.

### Transfer of Credit

Students expecting to transfer to a four-year college or university can usually complete the first two years of work at College of San Mateo. Students must complete 60 transferable units to be classified as juniors upon entering a four-year college or university. In any event, it is important that they consult with their counselors/advisors in order to arrange a program which will meet the requirements for transfer to the institution of their choice.

The earlier students make a decision regarding a transfer institution, the better their chances are for meeting all requirements without delay. If they are unable to make this decision when they enter College of San Mateo, they may elect to follow a general education transfer pattern.

High school subject deficiencies may be made up at College of San Mateo in order to meet course prerequisites at college level. In some instances students may qualify for transfer to the college of their choice by maintaining an acceptable grade-point average at College of San Mateo in a minimum of 56 units of appropriate transfer courses.

### Transfer Majors

Students who intend to transfer and major in one of the following fields should plan their course at College of San Mateo to meet the general requirements for junior standing, as well as the lower division departmental requirements of the college or university to which they plan to transfer. This list indicates some majors available and is not intended to be all inclusive. Students should work closely with counselors in order to fulfill both major and lower division requirements for the college of their choice, including specific courses to be taken at College of San Mateo.

|                           |                         |
|---------------------------|-------------------------|
| Accounting                | Industrial Arts         |
| Administration of Justice | Insurance               |
| Aeronautics               | Interior Design         |
| Agriculture               | International Relations |
| (Vocational)              | Journalism              |
| Anatomy                   | Law                     |
| Anthropology              | (Pre-Legal)             |
| Archaeology               | Liberal Arts            |
| Architecture              | Life Science            |
| Art                       | Machine Tool Technology |
| Astronomy                 | Management              |
| Bacteriology              | Marine Biology          |
| Biochemistry              | Marketing               |
| Biology                   | Mathematics             |
| Biophysics                | Medical Services        |
| Botany                    | Meteorology             |
| Business Administration   | Microbiology            |
| Business Education        | Music                   |
| Chemistry                 | Nursing                 |
| Criminology               | Nutrition               |
| Data Processing           | Office Administration   |
| Dental Hygiene            | Optometry               |
| Dentistry                 | (Pre-Optometry)         |
| (Pre-Dental)              | Paleontology            |
| Dietetics                 | Personnel Relations     |
| Drafting Technology       | Pharmacy                |
| Drama                     | Philosophy              |
| Ecology                   | Photography             |
| Economics                 | Physical Education      |
| Education                 | Physical Therapy        |
| Electronics Technology    | Physics                 |
| Engineering               | Physiology              |
| Engineering Technology    | Police Science          |
| English                   | Political Science       |
| Entomology                | Psychology              |
| Ethnic Studies            | Public Health           |
| Finance                   | Real Estate             |
| Foreign Language          | Recreation              |
| Forestry                  | Social Science          |
| French                    | Sociology               |
| Genetics                  | Spanish                 |
| Geography                 | Technical Art/Graphics  |
| Geology                   | Technology              |
| Geophysics                | Telecommunications      |
| German                    | Theatre Arts            |
| Health Science            | Transportation          |
| History                   | Veterinary Medicine     |
| Home Economics            | (Pre-Veterinary)        |
| Horticulture              | Welding Technology      |
| Humanities                | Wildlife Conservation   |
|                           | (Management)            |
|                           | Zoology                 |

## California State University and Colleges

### GENERAL EDUCATION REQUIREMENTS

Graduation from the California State University and Colleges requires the completion of a general education program (40 units) with at least 32 units chosen under specific limitations from the areas of (a) Natural Science, (b) Social Science, (c) Humanities and (d) Basic Subjects. In addition to the 32 units, the elective units may include any transferable course outside the area of the major. College of San Mateo will certify completion of the general education requirement (40 units) or the completion of specific area requirements if the student satisfies the following requirements.

#### NATURAL SCIENCES

(Minimum of 6 units—at least one course in Life Science and one course in Physical Science.)

##### LIFE SCIENCE

**Anthropology** 125

**Biology** 100, 102, 106, 110, 112, 113, 114, 115, 116, 117, 118, 119, 125, 130, 137, 140, 145, 150, 160, 180, 184, 210, 220, 230, 240, 245, 250, 260, 320, 325, 326, 410, 420

**Home Economics** 310

**Horticulture** 311, 312, 320, 340

**Paleontology** 110

##### PHYSICAL SCIENCE

**Astronomy** 100, 101, 102, 110, 120, 130

**Chemistry** 101-107\*, 210, 220, 224, 225, 231, 232, 250, 260, 410, 420

**Geography** 100

**Geology** 100, 130, 210, 220

**Home Economics** 113

**Meteorology** 100, 110

**Oceanography** 100

**Physical Science** 100

**Physics** 100, 210, 220, 250, 260

\*For the purpose of this requirement, three one-unit courses from Chemistry 101-107 are considered the equivalent of one course.

#### SOCIAL SCIENCES

(Minimum of 11 units—including American Institutions, State and Local Government requirement and 6 additional units.)

**Anthropology** 110, 130, 140, 180, 310

**Biology** 370

**Business** 101, 102

**Economics** 100, 102, 108, 130, 230, 250, 661, 662, 663

**Ethnic Studies** 101, 102, 150, 151, 152, 160, 261, 262, 290, 300, 305, 310, 425, 435, 450, 520, 645

**Geography** 110, 120, 150, 160, 170

**History** 100, 101, 102, 110, 130, 141, 142, 150, 160, 201, 202, 210, 230, 242, 260, 270, 280, 290, 310, 315, 350, 360, 401, 402, 421, 422, 450

**Home Economics** 412

**Labor Studies** 110, 120, 150, 200, 290

**Political Science** 100, 110, 130, 150, 200, 205, 210, 215, 220, 250, 255, 260, 300, 310, 520, 550

**Psychology** 100, 105, 108, 110, 201, 250, 300, 340, 355, 358, 400, 410, 480

**Social Science** 130-134, 185, 261, 262

**Sociology** 100, 105, 110, 141, 150, 151, 152, 200, 300

#### HUMANITIES

(Minimum of 6 units, including at least 3 units in Literature or Philosophy.)

**Architecture** 100

**Art** 101, 102, 103, 106, 108, 111, 141, 142, 151, 152, 350, 451, 452

**Drama** 101, 102, 140

**English** 110, 120, 130, 140

**Ethnic Studies** 266, 267, 270, 275, 288, 320, 350, 351, 510, 585

**French** 140, 161, 162, 620

**German** 140, 161, 162, 620

**Humanities** 101, 102, 111, 112, 113, 114, 125, 136, 140

**Literature** 101, 105, 111, 113, 115, 143, 151, 200, 201, 202, 231, 232, 251, 266, 301, 302, 430, 451, 452

**Music** 100, 202, 270, 275

**Philosophy** 100, 101, 105, 160, 170, 190, 240, 300, 320, 340, 395

**Spanish** 140, 161, 162, 251, 620

**Speech** 111, 112

#### BASIC SUBJECTS

(Minimum of 6 units, including English composition.)

**Art** 461, 462

**Data Processing** 110, 151, 160, 180

**Economics** 123

**English** 100, 161, 162, 165, 200, 210

**French** 110, 111, 112, 120, 121, 122, 130, 131, 132

**German** 110, 111, 112, 120, 121, 122, 130, 131, 132

**Japanese** 100, 101, 102, 110, 111, 112

**Mathematics** 105, 110, 111, 112, 115, 119, 120, 121, 125, 130, 151, 152, 162, 200, 210, 219, 220, 241, 242, 260, 261, 262, 263, 270, 275, 414, 415, 416, 417

**Philosophy** 200, 210

**Psychology** 121

**Spanish** 110, 111, 112, 120, 122, 130, 131, 132

**Speech** 100, 120, 130

#### ELECTIVES

Since individual campuses may have additional requirements in the upper division, it is important that you consult the catalog of the transfer institution and discuss the requirements with your counselor.

# College of San Mateo Courses Transferable Toward Baccalaureate Degree Credit at California State Universities and Colleges

1980-81

Courses which College of San Mateo designates as appropriate for baccalaureate credit are accepted by any of the California State Universities and Colleges for credit toward a baccalaureate degree. Below are listed the courses given at College of San Mateo which are transferable toward a baccalaureate degree.

**Accounting** 100, 111, 112, 195, 680, 690

**Admin. of Justice** 100, 102, 104, 106, 108, 120, 125, 140, 141, 142, 150, 153, 165, 170, 647, 680, 690

**Aeronautics** 100, 101, 102, 115, 126, 300, 301, 310, 311, 320, 321, 330, 331, 340, 341, 350, 351, 360, 361, 370, 371, 649, 680, 690

**Anthropology** 110, 125, 130, 140, 180, 310, 680, 690

**Architecture** 100, 110, 112, 114, 115, 120, 125, 130, 140, 145, 150, 160, 170, 210, 220, 230, 240, 644, 666, 680, 690

**Art** 101, 102, 103, 106, 108, 111, 141, 142, 145, 146, 147, 148, 151, 152, 155, 156, 157, 201, 202, 206, 207, 214, 223, 224, 231, 232, 237, 238, 241, 242, 301, 305, 310, 328, 336, 350, 351, 352, 353, 354, 355, 405, 411, 412, 415, 416, 450, 451, 452, 461, 462, 642, 680, 690

**Astronomy** 100, 101, 102, 107, 110, 120, 130, 680, 690

**Biology** 100, 102, 106, 110, 112, 113, 114, 115, 116, 117, 118, 119, 125, 130, 137, 140, 145, 150, 160, 180, 182, 184, 210, 220, 230, 240, 245, 250, 260, 314, 320, 325, 326, 327, 370, 410, 420, 644, 680, 690

**Business** 100, 101, 115, 123, 129, 130, 140, 150, 151, 152, 154, 170, 175, 180, 185, 190, 201, 202, 204, 220, 270, 271, 272, 273, 274, 275, 276, 277, 279, 412, 641, 680, 690

**Career/Personal Development (formerly Guidance)** 111, 132, 133, 140, 410, 430, 680

**Chemistry** 100, 101, 102, 103, 104, 105, 106, 107, 210, 220, 224, 225, 231, 232, 250, 260, 410, 420, 680, 690

**Dance** 121, 122, 130, 141, 143, 148, 180, 360, 380, 411, 412, 642, 680, 690

**Data Processing** 110, 120, 140, 151, 152, 160, 162, 170, 180, 195, 641, 680, 690, 695

**Drafting Technology** 120, 201, 202, 301, 302, 400, 680, 690

**Drama** 101, 102, 140, 200, 201, 202, 203, 250, 260, 300, 305, 338, 642, 680, 690

**Early Childhood Education** 210, 211, 212, 230, 647, 690

**Economics** 100, 102, 108, 123, 130, 230, 250, 412, 661, 662, 663, 680, 690

**Education** 100

**Electronics** 100, 110, 200, 230, 250, 252, 260, 280, 300, 302, 310, 330, 350, 360, 362, 380, 680, 690

**Engineering** 111, 112, 120, 150, 160, 200, 220, 230, 260, 270, 644, 666, 680, 690, 700

**English** 100, 110, 120, 130, 140, 161, 162, 165, 195, 200, 210, 311, 312, 313, 314, 643, 680, 690

**Ethnic Studies** 101, 102, 150, 151, 152, 160, 261, 262, 266, 267, 270, 275, 288, 290, 300, 305, 310, 320, 350, 351, 425, 435, 450, 510, 520, 585, 645, 680, 690

**Fire Science** 647, 680, 690, 700, 705, 710, 712, 715, 720, 725, 731, 732, 740, 745, 750, 755, 760, 771, 772, 781, 782

**French** 110, 111, 112, 120, 121, 122, 130, 131, 132, 140, 161, 162, 201, 202, 620, 680, 690

**Geography** 100, 110, 120, 150, 160, 170, 680, 690

**Geology** 100, 130, 210, 220, 680, 690

**German** 110, 111, 112, 120, 121, 122, 130, 131, 132, 140, 161, 162, 201, 202, 620, 680, 690

**Health Science** 100, 101, 102, 103, 104, 105, 106, 109, 111, 112, 160, 310, 644, 680, 690



**History** 100, 101, 102, 110, 130, 141, 142, 150, 160, 201, 202, 210, 230, 242, 260, 270, 280, 290, 310, 315, 350, 360, 401, 402, 421, 422, 450, 680, 690

**Home Economics** 110, 113, 116, 117, 118, 151, 152, 154, 301, 302, 310, 412, 450, 647, 666, 680, 690

**Horticulture** 311, 312, 315, 320, 327, 330, 340, 341, 342, 411, 412, 415, 647, 680, 690, 701, 702, 705, 706, 711, 712, 721, 722, 731, 732, 741, 742, 771, 772, 773, 774, 775, 776

**Humanities** 101, 102, 111, 112, 113, 114, 125, 136, 140, 680, 690

**Japanese** 100, 101, 102, 110, 111, 112

**Journalism** 110, 120, 300, 310, 680, 690

**Labor Studies** 110, 120, 125, 140, 150, 200, 290, 680, 690

**Library Science** 100

**Literature** 101, 105, 111, 113, 115, 143, 151, 200, 201, 202, 231, 232, 251, 266, 301, 302, 430, 451, 452, 461, 462, 643, 680, 690

**Machine Tool Technology** 100, 110, 111, 120, 121, 210, 211, 220, 221, 230, 680, 690

**Management** 100, 110, 205, 300, 301, 303

**Mathematics** 105, 110, 111, 112, 115, 119, 120, 121, 125, 130, 151, 152, 162, 200, 210, 219, 220, 241, 242, 260, 261, 262, 263, 270, 275, 414, 415, 416, 417, 680, 690

**Medical Assisting** 110, 140

**Meteorology** 100, 110, 680, 690

**Military Science** 1a-b, 12a-b.

**Music** 100, 101, 102, 103, 104, 131, 132, 133, 134, 150, 170, 202, 270, 275, 301, 302, 303, 304, 320, 340, 360, 371, 372, 402, 403, 430, 440, 445, 450, 460, 470, 480, 490, 495, 642, 680, 690

**Nursing** 210, 221-222, 231, 232, 240, 647

**Oceanography** 100

**Paleontology** 110

**Philosophy** 100, 101, 105, 160, 170, 190, 200, 210, 240, 300, 320, 340, 395, 680, 690

**Physical Education** All classes in the following series: 100-199, 200-299, 300-399, 400-499, 600-699

**Physical Science** 100

**Physics** 100, 210, 220, 250, 260, 270, 680, 690

**Political Science** 100, 110, 130, 150, 200, 205, 210, 215, 220, 250, 255, 260, 300, 310, 520, 550, 680, 690

**Psychology** 100, 105, 108, 110, 121, 201, 250, 300, 340, 355, 358, 400, 410, 480, 680, 690

**Real Estate** 100, 105, 110, 121, 131, 141, 143, 145, 200, 210, 215, 220

**Recreation Education** 100, 110

**Secretarial Science** 100, 110, 120, 200, 210, 211, 230, 300, 401, 440, 444

**Social Science** 130, 131, 132, 133, 134, 185, 261, 262, 648, 680, 690

**Sociology** 100, 105, 110, 141, 150, 151, 152, 200, 300, 680, 690

**Spanish** 110, 111, 112, 120, 121, 122, 130, 131, 132, 133, 140, 161, 162, 201, 202, 251, 620, 680, 690

**Speech** 100, 111, 112, 120, 130, 680, 690

**Technical Art/Graphics** 201, 202, 210, 220, 300, 310, 351, 352, 400, 680, 690

**Technology** 100, 110, 120, 200, 649, 680, 690

**Telecommunications** 110, 115, 131, 132, 135, 192, 195, 231, 232, 241, 242, 243, 642, 680, 690

**Welding Technology** 100, 110, 111, 120, 121, 210, 211, 220, 221, 300, 680, 690

**Cooperative Education** 601, 602, 640, 641, 642, 643, 644, 646, 647, 648, 649 with a maximum of 12 units.

## Stanford University

### JUNIOR STANDING REQUIREMENTS

Selection is made on a competitive basis from those who meet minimum requirements and who have a significant reason for transferring to Stanford. All student candidates must satisfy general requirements for admission to the University itself, as well as special requirements for admission to the Schools of Medicine, Law, Nursing or the Hopkins Marine Station.

**Academic Requirements for Junior Standing:**

- 1. Completion of 87 quarter units (58 semester units). Normally a 2.75 grade point average is required for consideration.**
- 2. A satisfactory score on the Scholastic Aptitude Test of the College Entrance Examination Board.**
- 3. Recommendations as to character and personal qualifications.**

Students are urged to consult with their counselor at the College in regard to their plans and to refer to the Stanford University Bulletin which may be secured directly from Stanford University.

## **University of California**

A student planning to transfer to one of the campuses of the University of California can usually complete the first two years of his or her work at College of San Mateo. In some cases, students may wish to make up high school course deficiencies or grade point average deficiencies. It is important to work with your counselor from the general catalog of the University campus you plan to attend. The current issue of the University publication "Prerequisites and Recommended Subjects" is a helpful planning guide. It lists the requirements for admission, breadth requirements and requirements for the major, all of which should be carefully considered in planning your program at CSM.

## Courses from College of San Mateo Acceptable at University of California (All Campuses)

This information represents that most current at the time of publication of this catalog. The College of San Mateo recommends strongly that you discuss the transferability of courses to the University of California with your counselor who may have more recent information and who can assist with the interpretation of the course applicability to various major programs.

**Accounting** 111, 112

**Administration of Justice (Police Science)** 100, 102, 104, 106, 108, 120, 125

**Anthropology** 110, 125, 130, 140, 180, 310

**Architecture** 100, 110, 112, 120, 130, 140, 145, 220, 230, 240

**Art** 101, 102, 103, 106, 108, 111, 201, 202, 207, 214, 223, 224, 231, 232, 237, 238, 301, 305, 310, 350, 351, 352, 353, 354, 405, 411, 412, 413, 414, 415, 416, 451, 452, 461, 462

**Astronomy** 100, 101, 102, 107, 110, 120, 130

**Biology** 100, 102, 106, 110, 112, 113, 114, 115, 116, 117, 118, 119, 125, 130, 140, 145, 150, 160, 180, 182, 184, 210, 220, 230, 240, 245, 250, 260, 370

**Business** 123, 130, 201, 202

**Chemistry** 100, 101, 102, 103, 104, 105, 106, 107, 210, 220, 224, 225, 231, 232, 250, 260, 410, 420

**Cooperative Education** 640-649 (1-4; maximum 6 units in otherwise transferable areas only.)

**Data Processing** 110, 140, 151, 152, 160, 162, 180

**Drama** 101, 102, 140, 200, 201, 202, 203, 230, 250, 260, 300, 305, 338

**Early Childhood Education** 212, 230

**Economics** 100, 102, 108, 123, 130, 230, 250, 661, 662, 663

**Education** 100

**Engineering** 111, 112, 200, 220, 230, 260, 270, 666

**English** 100, 110, 120, 130, 140, 161, 162, 165, 200, 210, 311, 312, 313, 314, 411

**Ethnic Studies** 101, 102, 150, 151, 152, 160, 261, 262, 266, 267, 270, 275, 288, 290, 300, 305, 310, 320, 350, 351, 425, 435, 450, 510, 520, 585, 645

**French** 110, 111, 112, 120, 121, 122, 130, 131, 132, 140, 161, 162, 201, 202, 620

**Geography** 100, 110, 120, 150, 160, 170

**Geology** 100, 130, 210, 220

**German** 110, 111, 112, 120, 121, 122, 130, 131, 132, 140, 161, 162, 201, 202, 620

**Health Science** 100, 101, 102, 103, 104, 105, 106, 109, 111, 112, 310

**History** 100, 101, 102, 110, 130, 141, 142, 150, 160, 201, 202, 210, 230, 242, 260, 270, 280, 290, 310, 315, 350, 360, 401, 402, 421, 422, 450

**Home Economics** 110, 113, 117, 118, 301, 302, 303, 310, 412, 450

**Humanities** 101, 102, 111, 112, 113, 114, 125, 136, 140

**Japanese** 100, 101, 102, 110, 111, 112

**Journalism** 110, 120, 300, 310

**Labor Studies** 110, 290

**Library Science** 100

**Literature** 101, 105, 111, 113, 115, 143, 151, 200, 201, 202, 231, 232, 251, 266, 301, 302, 430, 451, 452, 461, 462

**Mathematics** 105, 125, 151, 152, 162, 200, 210, 219, 220, 241, 242, 260, 261, 262, 263, 270, 275

**Meteorology** 100

**Military Science** 1a, 1b, 12a, 12b

**Music** 100, 101, 102, 103, 104, 131, 132, 133, 134, 150, 170, 202, 270, 275, 301, 302, 303, 304, 320, 340, 360, 371, 372, 402, 403, 430, 440, 445, 450, 451, 460, 470, 480, 490, 495, 496

**Oceanography** 100

**Paleontology** 110

**Philosophy** 100, 101, 105, 160, 170, 190, 200, 210, 240, 300, 320, 340, 395

**Physical Education** All classes in the following series: 100-199, 200-299, 300-399, 400-499, 600-699

**Physical Science** 100

**Physics** 100, 210, 220, 250, 260, 270

**Political Science** 100, 110, 130, 150, 200, 205, 210, 215, 220, 250, 255, 260, 300, 310, 520, 550

**Psychology** 100, 105, 108, 110, 121, 201, 250, 300, 340, 355, 400, 410, 480

**Recreation Education** 100, 110

**Social Science** 130, 131, 132, 133, 134, 185, 261, 262

**Sociology** 100, 105, 110, 141, 150, 151, 152, 200, 300

**Spanish** 110, 111, 112, 120, 121, 122, 130, 131, 132, 140, 161, 162, 201, 202, 251, 620

**Speech** 100, 111, 112, 120, 130

**Telecommunications** 110, 241, 242, 243

**SPECIAL NOTE:**

The following courses are also transferable:  
601, 602, 640, 641, 642, 643, 644, 646, 647, 648, 649,  
Cooperative Education in Division  
680 Special Seminar in Department  
690 Individual Study in Department

## Career Programs

Specialized career programs are offered in more than fifty occupational fields (see tabular listing which follows) for students planning to prepare for gainful employment. All career programs are carefully developed by advisory committees composed of college staff and selected representatives from the business and industrial community.

Career programs are designed to develop personal and technical competencies necessary for successful employment and job advancement.

### Two-Year Career Programs—AA or AS Degree

All two-year programs lead to an Associate in Arts or Associate in Science degree. Many of the units earned in career programs are accepted by four-year colleges as meeting certain requirements.

### Certificate Programs

Certificates of Proficiency or Certificates of Completion are awarded upon successful completion of selected career programs. Some certificates require less than two years of full-time study. To be eligible for a certificate, a student must pass all required certificate courses with a grade of "C" or better.

Certificates may be earned through day or evening part-time enrollment or during regular full-time enrollment.

## College of San Mateo A.A./A.S. Degree and Certificate Career Programs

| Occupational Area         | Curriculum                                  | A.A./A.S.<br>Degree | Certificate |
|---------------------------|---|---------------------|-------------|
| Administration of Justice | Administration of Justice                   | X                   | X           |
| Aeronautics               | Aircraft Maintenance Technology             | X                   |             |
|                           | Airframe/Powerplant Maintenance Technology  | X                   | X           |
|                           | Commercial Pilot Technology                 | X                   | X           |
|                           | Pilot Technology                            | X                   |             |
| Art                       | Interior Design                             | X                   | X           |
| Building Inspection       | Building Inspection                         |                     | X           |
| Business                  | Banking                                     |                     |             |
|                           | Banking Operations                          |                     | X           |
|                           | Credit & Lending                            |                     | X           |
|                           | Business Administration                     | X                   |             |
|                           | Accounting Paraprofessional                 | X                   | X           |
|                           | Chartered Life Underwriter                  |                     | X           |
|                           | Clerical                                    | X                   | X           |
|                           | Data Processing                             | X                   |             |
|                           | Computer Programmer                         |                     | X           |
|                           | Computer Operator                           |                     | X           |
|                           | Escrow                                      | X                   | X           |
|                           | Key Data Entry                              |                     | X           |
|                           | Legal Secretary                             | X                   | X           |
|                           | Management                                  |                     |             |
|                           | Business Management                         | X                   | X           |
|                           | Small Business Management                   | X                   | X           |
|                           | Industrial Management                       | X                   | X           |
|                           | Marketing Management                        | X                   | X           |
|                           | Medical Assisting                           | X                   | X           |
|                           | Merchandising—Fashion                       | X                   | X           |
|                           | Merchandising—General                       | X                   | X           |
|                           | Merchandising—Management                    | X                   | X           |
|                           | Real Estate                                 | X                   | X           |
|                           | Secretarial—Shorthand Specialty             | X                   | X           |
|                           | Secretarial—Machine Transcription Specialty | X                   | X           |
|                           | Secretarial—Word Processing Specialty       | X                   | X           |
|                           | Transportation                              | X                   | X           |
| Home Economics            | Home Economics                              | X                   |             |
|                           | Fashion Merchandising                       | X                   | X           |
| Cosmetology               | Cosmetology—Cosmetologist                   | X                   | X           |
|                           | Cosmetology—Manicurist                      |                     | X           |
|                           | Cosmetology—Instructor                      | X                   |             |
| Dental Assisting          | Dental Assisting                            | X                   | X           |
| Education                 | Teacher Assistant                           | X                   | X           |
| Fire Science              | Fire Science                                | X                   | X           |
|                           | Fire Science Academy                        |                     | X           |

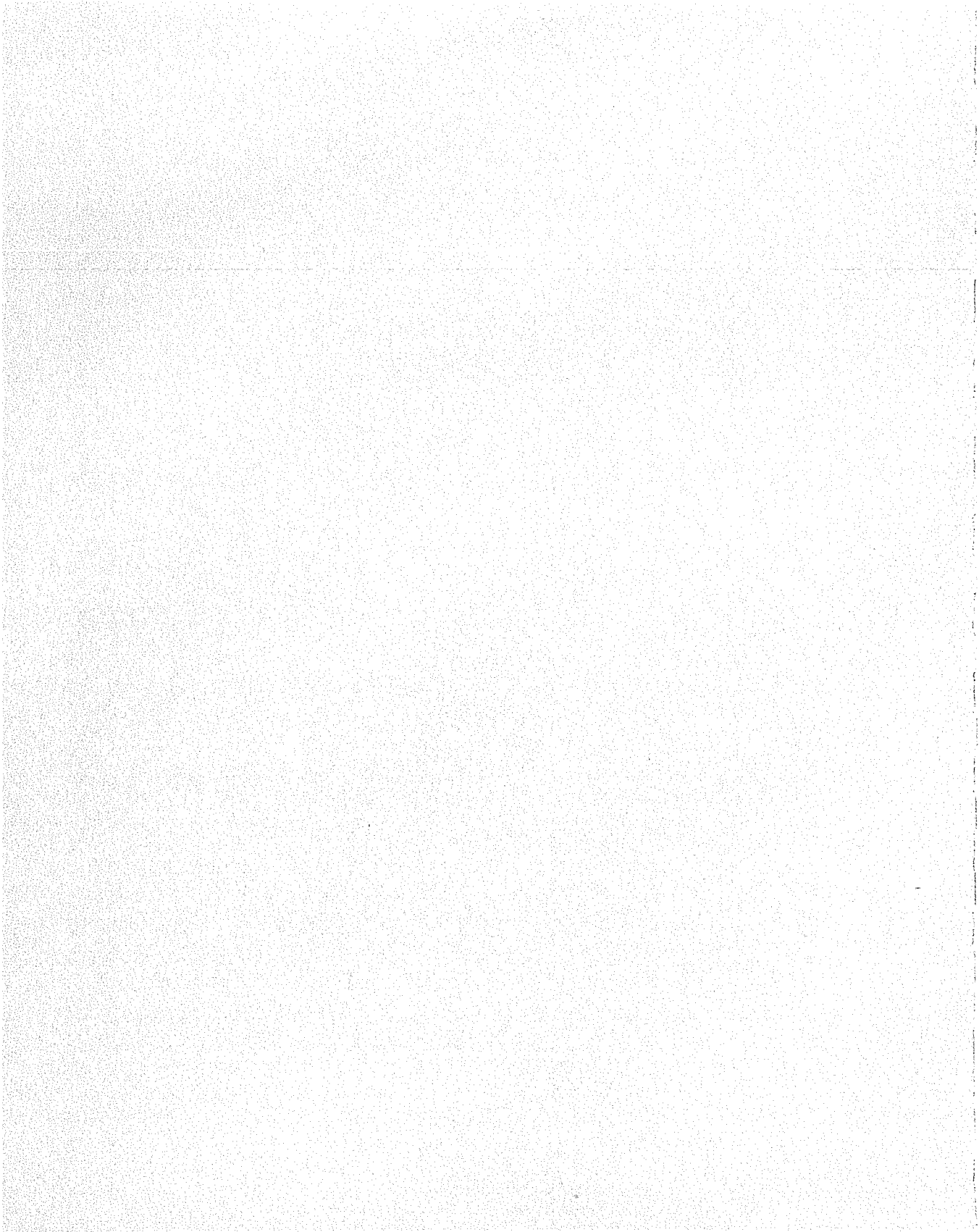
|                     |                            |   |   |
|---------------------|----------------------------|---|---|
| <b>Horticulture</b> | Floristry                  |   | X |
|                     | Vocational Gardening       |   | X |
|                     | Environmental Horticulture | X | X |
|                     | Ornamental Horticulture    | X | X |

### College of San Mateo A.A./A.S. Degree and Certificate Career Programs

| Occupational Area         | Curriculum                                    | A.A./A.S.<br>Degree | Certificate |
|---------------------------|---|---------------------|-------------|
| <b>Nursing</b>            | Nursing                                       | X                   |             |
|                           | Nursing—Vocational                            | X                   | X           |
|                           | Nursing Assistant Home Health Aide            |                     | X           |
| <b>Technology</b>         | Building Inspector                            |                     | X           |
|                           | Drafting Technology                           | X                   | X           |
|                           | Electronics Technology                        | X                   | X           |
|                           | Machine Tool Technology                       | X                   | X           |
|                           | Technology Art/Graphics                       | X                   | X           |
|                           | Welding Technology                            | X                   | X           |
| <b>Telecommunications</b> | Broadcast Engineering<br>(Radio & Television) | X                   | X           |
|                           | Radio Broadcasting                            | X                   | X           |
|                           | Television Broadcasting                       | X                   | X           |
|                           |   |                     |             |

For information on other occupational programs in the District, call Cañada College, 364-1212, or Skyline College, 355-7000.

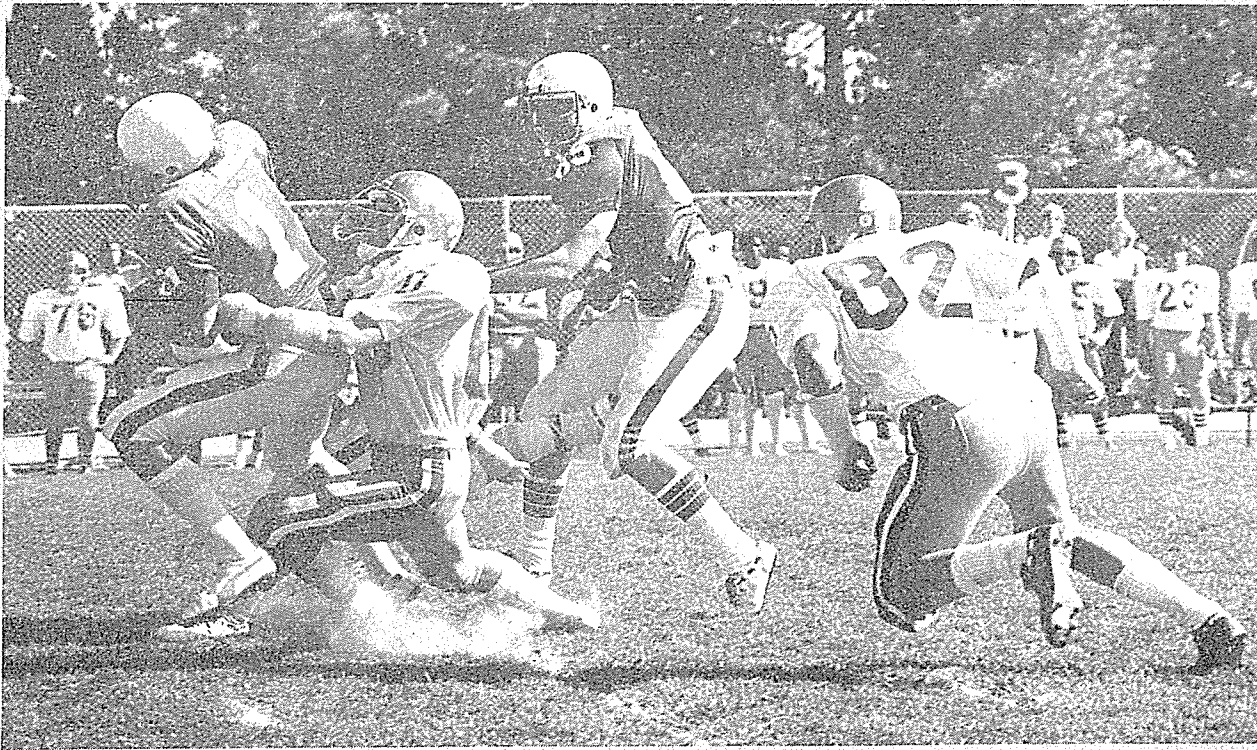




# Course Requirements



Women's Basketball Team  
See story on following page



## PHYSICAL EDUCATION

Quite a distinction came to College of San Mateo during the 79-80 year when two of its coaches won top awards given by the California Coaches Association. Bob Rush was named Cross Country Coach of the Year and Tom Martinez won the Women's Basketball Coach of the Year title. These honors are especially meaningful to the recipients as the nominations and selections are made by fellow coaches throughout the state.

It was also a year in which several outstanding CSM athletes were singled out for recognition in the Golden Gate Conference. Among them was Meri Veavea who was named women's basketball "Player of the Year" and Perry Parmalee, the nation's top community college wide receiver for the '79-80 season, who received the "Player of the Year" award for football.

Ms. Veavea, whose team won the conference championship for the fourth straight year and the Northern California Women's Basketball Intercollegiate Championship for the second time, said, "It meant a lot to me to be on the team this year. I learned a lot about discipline and I learned to be competitive". Coach Martinez, reflecting on his success at building strong, aggressive teams, said, "It's hard to get to the top, but even harder to stay there".

For hundreds of CSM students, whether or not they win titles or place high in competition, there are definite rewards for participation in intercollegiate sports. It's the kind of class situation like no other, where important lessons in teamwork, discipline, and trust are learned on fields, tracks, and courts.

College of San Mateo sponsors 13 intercollegiate sports within the Golden Gate Conference. For men there are baseball, basketball, cross country, football, golf, track and wrestling. Women participate in basketball, cross-country, tennis, softball, track, and volleyball. For men and women who are interested in competitive activity, but lack time or training for intercollegiate athletics, the intramural program provides a wide variety of team and individual sports.

In addition to competitive sports, the division offers a wide range of Physical Education classes, open to all adults in traditional and not-so-traditional areas. In answer to current interest in the martial arts, the College offers a number of sections in judo and karate. Classes which stress fitness and/or weight loss include jogging and par course, body awareness for women, musical fitness, aquatic fitness, weight conditioning for weight watchers and slim trim. Other non-traditional classes include backpacking, massage, yoga and fencing.





## Course Requirements for Transfer Majors A.A./A.S. Degrees, Certificate Career Programs

### Administration of Justice

*Associate in Science Degree with a Major in Administration of Justice*

This program is designed for both transfer and non-transfer students. Although only 18 units with grades of C or better in Administration of Justice courses are necessary for the major, it is recommended that the transfer student take the five core courses plus nine elective units only and concentrate in the area of general education for transfer in junior standing to a four-year institution.

| Requirements   | Semester Units |
|--|----------------|
| Administration of Justice 100, 102, 104, 106, 108 and three elective units | 18             |

**Suggested Electives:** Administration of Justice 120 and 165 are highly recommended for transfer students; 125, 150, 153 are also desirable.

General Education and other requirements for the A.S. degree: See pages 61-62.

#### Certificate Programs

These programs, offered to police officer classification and qualified pre-service students, consist of the following pre-service courses: Introduction (3 units), Principles and Procedures of Justice System (3 units), Criminal Law (3 units), Criminal Evidence (3 units), Police Community Relations (3 units), Criminal Investigation (3 units), and Traffic Supervision and Control (3 units). Students who complete these courses receive a Certificate of Completion and college credit, which may be applied to the Associate in Science degree.

Verification of completion will be issued for the following special courses upon completion with a grade of C or better. Elective credit may be applied to the A.S. degree.

|   |           |
|---|-----------|
| ADMJ 755 Advanced Officer Training          | 1-2 units |
| ADMJ 760 Peace Officer Orientation          | 1-2 units |
| ADMJ 762 Security Baton                     | ½-1 units |
| ADMJ 766 Police Firearms, Chemical Agent    | ½-1 units |
| ADMJ 771, 772, 773 Reserve Officer Training | 10 units  |

### Aeronautics

Transfer programs are available for four-year degree curricula at San Jose and San Francisco State Universities and other institutions which provide Aeronautics or Design and Industry majors.

### Aeronautics— Airframe and Powerplant Technology

*Associate in Science Degree with a Major in Airframe and Powerplant Technology*

Recommended High School Preparation: Elementary Algebra, Intermediate Algebra, Plane Geometry, Drafting, General Shop, Physics, or Physical Sciences. Students should check course descriptions and prerequisites and discuss recommended sequence with counselors.

Because of Federal Aviation Administration regulations regarding attendance and performance, the following special rules apply to all Maintenance courses Aero 300 through Aero 370: 1) Any time missed during one of these courses must be made up before the end of the semester. If more than three days or 18 hours are missed in any one course, the student will receive a "W," and the course must be repeated before he/she is eligible to enroll in an advanced course. 2) Anything less than 70% (letter grade of C) will be considered a failing grade. A final examination will be given at the end of each eight-week course. Failure to achieve a 70% on this final examination will require that the course be repeated before the student can enroll in an advanced course.

**Priorities for Admission:** Preference will be given to applicants who have (1) successfully completed Aero 680, "Introduction to Aeronautics," and English 680, "Writing for Industry," and (2) residents of San Mateo County.

**Career Opportunities:** The student who completes courses and obtains a Federal Aviation Certificate and Associate in Science degree in Airframe and Powerplant Technology has excellent opportunities for steady employment by airlines as well as other aircraft operations.

| Requirements                              | Semester Units |
|---|----------------|
| Airframe: Aero 350, 351, 370, 371 .....   | 13             |
| Powerplant: Aero 340, 341, 360, 361 ..... | 13             |
|   | Total 26       |

If a student has an airframe or powerplant license, upon application to the Aeronautics Department, 7 units of credit may be granted. If a student wishes to have an A.S. degree in Airframe and Powerplant, a minimum of 6 units from the following list of technical electives is required, plus the airframe or powerplant curriculum lacking. Technology 100, Electronics 110, 280, Telecom. 190, Drafting 120, Welding 300, Physics 100.

| Requirements                                       | Semester Units |
|--|----------------|
| FAA Airframe or Powerplant license (equivalent) .. | 7              |
| Powerplant: Aero 340, 341, 360, 361 .....          | 13             |
| Airframe: Aero 350, 351, 370, 371                  |                |
| Technical Electives (6 units required)             |                |
| Technology 100; Electronics 110, 280; Telecom.     |                |
| 190, Drafting 120; Welding 300; Physics 100 .....  | 6              |
|  | Total 26       |

If a student wishes to obtain an A.A. or A.S. degree in some other major, the 7 units may be used for elective credit. General Education and other requirements for the A.S. degree: see Pages 61-62.

#### Certificate Program

Students may apply for a certificate in Airframe and Powerplant Technology upon completion of the following courses:

| Requirements                                       | Semester Units |
|--|----------------|
| Aero. 340, 341, 350, 351, 360, 361, 370, 371 ..... | 26             |

## Aeronautics— Aircraft Maintenance Technology

*Associate in Science Degree with a Major in Aircraft Maintenance Technology*

This major is designed especially for the student who already possesses both the airframe and powerplant licenses granted by the F.A.A. Upon application to the Aeronautics Department, a student may receive 13 units of credit toward an Associate in Science degree in Aircraft Maintenance Technology. Applicants must have completed 12 units at College of San Mateo with a 2.5 G.P.A. and be enrolled at the College at the time of application. In addition, a minimum of 13 units is required from the list of selective electives as indicated below:

| Requirements                                  | Semester Units  |
|---|-----------------|
| F.A.A. Airframe and Powerplant licenses ..... | (equivalent) 13 |

#### Select 12 units from the following courses:

|  |          |
|--|----------|
| Drafting 120; Electronics 110, 280; Physics 100; |          |
| Technology 100; Welding 300; Electronics         |          |
| 770, 771; Telecom. 190 .....                     | 13       |
|  | Total 26 |

If a student wishes to obtain an A.A. or an A.S. degree in some other major, the 13 units may apply toward elective credit.

General Education and other requirements for the A.S. degree: see pages 61-62.

## Aeronautics— Commercial Pilot

*Associate in Science Degree with a Major in Commercial Pilot*

Recommended High School Preparation: Intermediate Algebra, Plane Geometry, Drafting, Trigonometry, General Shop, and Physics or Physical Sciences or Business Administration. Students should check course descriptions and prerequisites, and discuss recommended sequence with counselors.

Designed for the student who plans to become a commercial pilot, flight instructor, airline pilot or fixed-base operator. This program may also be used as basic training for aviation business and entrance into air traffic control employment.

| Requirements   | Semester Units |
|--|----------------|
| Aeronautics 100, 101, 102, 103*, 115, 126, 137 ..... | 18.5           |
| Meteorology 100 or 110 .....                         | 3              |
|  | Total 21.5     |

General Education and other requirements for A.S. degree: See pages 61-62.

#### Certificate Program

Students may apply for a certificate in Commercial Pilot upon completion of the following courses:

| Requirements                                   | Semester Units |
|--|----------------|
| Aero. 100, 101, 102, 103*, 115, 126, 137 ..... | 18.5           |
| Meteorology 100 or 110 .....                   | 3              |
|  | Total 21.5     |

\*Aero. 103 may be taken five times for credit.

## Aeronautics— Pilot Technology

*Associate in Science with a Major in Pilot Technology*

This major is designed especially for the student who already possesses a commercial pilot, instrument,



and multi-engine license or an airline transport pilot license. Upon application to the Aeronautics Department, a student may receive eleven units of credit toward an Associate in Science degree in Pilot Technology. Applicants must have completed 12 units at College of San Mateo with a 2.5 G.P.A. and be enrolled at the College at the time of application. In addition, the student must take an additional twelve units from the selected electives listed below.

| Requirements   | Semester Units |
|--|----------------|
| Commercial, instrument, and multi-engine license or air transport license (equivalent) ..... | 11             |

**Select 12 units from the following courses**

|  |    |
|--|----|
| Aero. 115, Business 101; Data Proc. 110; Electronics 110; Business 100; Technology 100; Physics 100; Astronomy 100 ..... | 12 |
| Total  | 23 |

If a student wishes to obtain an A.A. or A.S. degree in some other major, the eleven units may apply toward elective credit.

## Agriculture

### Transfer Program

Recommended High School Preparation: Chemistry, Physics, Elementary Algebra, Intermediate Algebra, Geometry, Trigonometry, Mechanical Drawing, two years in one foreign language.

The student who intends to transfer a major in Agriculture should plan a course at College of San Mateo to meet the general requirements for junior standing, as well as the lower division requirements of the specific college or university.

## Apprenticeship— Trade Related

Related training classes for apprentices are offered. (See Trade and Industrial courses.)

## Archaeology

See Anthropology courses.

## Architecture— Architectural Engineering, Landscape, City and Regional Planning

Students who plan to transfer to a university or college offering a professional program in Architecture

should consult the catalog of the advanced institution of their choice, and then arrange a schedule of suitable transfer courses.

## Architecture

### Associate in Science Degree with a Major in Architecture

Recommended High School Preparation: Academic program including Mathematics (4 years), Art (1 year), Mechanical Drawing (1 semester). Students should check course descriptions and prerequisites, and discuss recommended sequence with counselors. Courses listed below are transfer requirements; those marked with an asterisk are A.S. degree requirements.

| Requirements   | Semester Units |
|--|----------------|
| Architecture 100, 120*, 130*, 140*, 145, 150, 160, 170, 210*, 220*, 230*, 240* ..... | 33             |

**Suggested Electives:** Architecture 112, 114, 115, 125; mathematics by eligibility; Physics 210, 220.

General Education and other requirements for the A.S. degree: See Pages 61-62.

## Art

### Associate in Arts Degree with a Major in Art

| Requirements  | Semester Units |
|---|----------------|
| Art 201, 301, plus 12 units from courses in the Arts Department ..... | 18             |

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Art—Commercial

### Associate in Arts Degree with a Major in Commercial Art

Recommended High School Preparation: Design, Drawing, Painting and Poster Service.

Career Opportunities: Commercial artists may be employed in advertising, manufacturing, public relations or communications. Experienced artists frequently specialize in a particular product or field such as fashion, industrial art, advertising, story illustration or interior design.

| Requirements                                | Semester Units |
|---|----------------|
| Art 201, 202, 206, 207, 301, 310, 328 ..... | 21             |

Students should check course descriptions and prerequisites, and discuss recommended sequences with counselors.

|                                  |   |
|----------------------------------|---|
| Technical Art/Graphics 351 ..... | 2 |
|----------------------------------|---|

**Suggested Electives:** Art 214, 223, 231, 241, 320, 305; Business 175; CRER 410; Speech 100.

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Art—Interior Design

*Associate in Arts Degree with a Major in Interior Design*

| Requirements                               | Semester Units |
|--|----------------|
| Art 145, 146, 147, 148, 151, 152, 157, 450 | 24             |

**Suggested Electives:** Art 101, 102, 103, 155, 156, 201.

General Education and other requirements for the A.A. degree: See Pages 61-62.

*Certificate Program*

| Requirements                          | Semester Units |
|---------------------------------------|----------------|
| Art 145, 146, 147, 148, 151, 157, 450 | 21             |

**Suggested Elective:** Art 152

## Art—Painting

*Associate in Arts Degree with a Major in Painting*

| Requirements                               | Semester Units |
|--|----------------|
| Art 201, 202, 207, 214, 223, 231, 237, 405 | 24             |

Students should check course descriptions and prerequisites, and discuss recommended sequences with counselors.

**Suggested Electives:** Art 101, 102, 103, 406

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Art—Photography

*Associate in Arts Degree with a Major in Photography*

| Requirements                                   | Semester Units |
|--|----------------|
| Art 201 or 301 or 350, 351, 352, 353, 354, 355 | 21             |

**Suggested Electives:** Art 101, 214, 237, 461; Technical Art/Graphics 351, 352

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Building Inspection

*Certificate Program*

Students may apply for a Certificate in Building Inspection upon completion of 24 units from the following courses:

| Requirements                 | Semester Units |
|------------------------------|----------------|
| 700, 710, 720, 730, 740, 750 | 15-18          |

**Select 6-9 units from the following courses:**

|                                    |          |
|------------------------------------|----------|
| Technology 700; Business 101, 160, |          |
| Management 110, 235                | 6-9      |
|                                    | Total 24 |

## Business Administration

**Transfer Program**

Recommended High School Preparation: Elementary Algebra, Intermediate Algebra, Plane Geometry, Trigonometry, Chemistry or Physics, Foreign Language. If student has not completed Intermediate Algebra in high school, he/she should take Math 120 or 119 and 121.

For information concerning the transfer requirements of other colleges and universities, students should consult the catalog of the colleges and universities concerned, or their College of San Mateo Counselor.

*Associate in Arts Degree with a Major in Business Administration*

The curriculum is for the student who wishes to major in general business. Students should check course descriptions and prerequisites, and discuss recommended sequence with counselors.

| Requirements  | Semester Units |
|---|----------------|
| <b>Option 1</b> —Actg. 111, 112, 195; Bus. 201, 123 | 19             |
| <b>Option 2</b> —Bus. 100, 101, 115, Actg. 100      |                |
| or Actg. 111; Bus. 129; Bus. 201, Actg. 195         |                |
| or D.P. 110   | 20-21          |

**Suggested Electives:**

|   |    |
|---|----|
| <b>Option 1</b> —Econ. 100, 102               |    |
| <b>Option 2</b> —Bus. 140, 150, 170, 180, 270 | 11 |

Courses listed in Option 1 are transfer requirements. Those listed in either Option 1 or Option 2 meet A.A. degree requirements.

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Business

**Career Programs**

The following major programs are designed to qualify a student, upon completion of a curriculum, for employment in an area of specialization. The development of business skills which can be utilized for immediate employment is emphasized, with general courses offered to provide a background for future promotion in the chosen occupational area.

Students graduating with a major in the field of Business must meet the following subject requirements:

**Mathematics**—A percentile rating of at least 35 of the quantitative part of the SCAT entrance examination, or completion of Bus. 810 with a grade of C or better. It is recommended that Bus. 810 be completed by the end of the second semester.

**Business 100**—Introduction to Business.

## Business—Accounting

*Associate in Arts Degree  
Certificate Program*

Recommended Preparation: Typing, general office procedures, good command of English usage.

Career Opportunities: Graduates may be employed in a position of paraprofessional accounting in accounting firms, government and private companies.

**Requirements:** **Semester Units**  
Actg. 111, 112, 113, 195; Bus 201, Bus 129 ..... 20

**Suggested electives:** Bus 100, 101, 115, 123; Econ 100, 102.

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Business—Banking

*American Institute of Banking Certificate Programs  
CSM Certificate awards are approved and endorsed  
by AIB.  
Bank Operations*

**Requirements** **Semester Units**  
Bus. 101, 115 or 810 or Mgmt. 300; Bus. 201; D.P. 110;  
Mgmt. 120 ..... 18

**Select 6 units from the following courses:**  
Sec. 100, 400, 401, Bus. 129; Mgmt. 105, 215, 235, Spch.  
120 ..... 6  
Total 24

*Credit and Lending*

**Requirements** **Semester Units**  
Actg. 111, 112, Econ. 100, 102, Mgmt. 301, 303 ..... 20

**Select 3 units from following courses:**  
Bus. 130, 129, Sec. 401; Bus. 201; Mgmt. 105, 135 ... 3  
Total 23

Actg. 100 or Actg. 111 recommended.

## Business—Clerical

*Associate in Arts Degree with a Clerical Major*

Recommended High School Preparation: Typing, General Office Procedures, Business English, Introduc-

tion to Business, Business Math, Recordkeeping, Business Law.

Career opportunities: Students primarily develop general skills and knowledge which are essential for making a living. These students may be employed in various entry-level positions for a career in business such as file clerks, receptionists, typists, bank tellers, and account clerks.

To meet the major requirements for the Associate in Arts degree, the student should plan a program to include any needed prerequisites for the core courses.

**Requirements** **Semester Units**  
Business 100, 810\*, 129, Sec. 400, 110 (3 units), 300 (2  
units), 412 ..... 14-17  
Electives from following list ..... 7  
Total 21-24

\*See Page 81 for Business Division's Mathematics requirement.

**Electives:** Business 101, 129, Sec. 300, 401, 440, 200, 210, 211, 230, 205, 145, 120, 410, 305, Actg. 100 or 111; Meda 100.

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Business—Clerical

*Certificate Program*

Students may apply for a Clerical Certificate upon completing the A.A. degree major requirements with grades of C or better.

## Business—Data Processing

*Associate in Arts Degree with a Major in Data Processing*

**Requirements** **Semester Units**  
Data Proc. 110, 130, 140, 151, 152, 160 ..... 23  
Actg. 111 or 100 ..... 4  
Total 27

Students should check course descriptions and prerequisites, and discuss recommended sequence with counselors.

General Education and other requirements for the A.A. degree: See Pages 61-62.

*Computer Operator Certificate Program*

Students may apply for this certificate upon completion of Data Processing 110, 130, 140, and 151.

*Computer Programmer Certificate Program*

Students may apply for this certificate upon completion of Data Processing 110, 130, 140, 151-152, and 160.

**Key Data Entry Certificate Program**

Students may apply for this certificate upon completion of Data Processing 120 with minimum speed of 8000 keystrokes per hour, less than 2% error rate, and ability to program and operate key-to-disk equipment.

**Business—Escrow**

*Associate in Arts Degree with a Major in Escrow*

The California Escrow Association recommends 24 units of required core courses and 12 units of suggested electives for the A.A. degree. See the Real Estate Department counselor for guidance regarding these courses and for information regarding the Escrow Certificate. See Escrow brochure for program details.

| Requirements   | Semester Units |
|--|----------------|
| R.E. 301*, 303, 305, 100*, 121, 131, Bus. 810, 115 (or a mathematics class—Math. 120 or higher), Sec. 401, Bus. 100..... | 24             |

**Select 12 units from following courses:** Bus. 101, Actg. 100 or 111, Ins. 110, Sec. 100, R.E. 110, 235, or Bus. 170, 200, 141 or 143, 210; Bus. 201; Econ. 100 or 102; Psych. 100; Spch. 100 or 120 ..... 12

General Education and other requirements for the A.A. degree: See Pages 61-62.

If a person has already earned an A.A. degree in Real Estate and wishes to earn a second A.A. degree in Escrow, it may be done by completing the three Escrow courses, Secretary 401, and 6 additional units taken from Real Estate. Please contact College catalog or a Real Estate counselor for additional information.

**Professional Certificate Program**

The Escrow Certificate requires completion of eight courses or 24 units of required courses and suggested electives. Units earned in the certificate program will fulfill the major requirements for the A.A. degree with a major in Escrow. See Escrow brochure for program specifics.

| Requirements                                      | Semester Units |
|---|----------------|
| R.E. 301*, 303, 305, 100*; R.E. 121 and 131 ..... | 18             |

**Select 6 units from following courses (as recommended by California Escrow Association):** Bus. 101, 810 or 115, Sec. 401, Actg. 100 or 111, Ins. 110, R.E. 110, 200, 141 or 143, 210, 230, Sec. 100 or Coop 641\*\* ..... 6  
Total 24

If the Escrow Certificate is earned following the Real Estate Certificate, the 6 units of selected electives must be taken from the category listed above, excluding any that have been utilized to earn the Real Estate Certificate.

\*At recommendation of the Real Estate Counselor and approval of Instructor of Real Estate 301, 303, may be by-passed; or at the recommendation of the Counselor alone, Real Estate 100 may be by-passed, provided equivalent units of the suggested electives are completed.

\*\*Verify with Real Estate Dept. Counselor requirements for Work Experience Program.

NOTE: CSM's Escrow Certificate Program has been approved for official certification by CEA (California Escrow Association). Check with the Real Estate Department Counselor for further details.

**Business—Legal Secretarial**

*Associate in Arts Degree with Legal Secretarial Major*

Recommended High School Preparation: Typing, Shorthand, Business English, Business Arithmetic and Office Machines.

Career Opportunities: The legal secretary may be employed in a small one-person office where the work will be varied and interesting. Secretaries in large law firms may specialize in areas such as domestic relations, probate, collections or breach of contract suits and may become specialists themselves. There are many government positions for legal secretaries in this area.

| Requirements   | Semester Units |
|--|----------------|
| Bus. 100, 810*, Sec. 440, Actg. 100 or 111, Sec. 250, 400, 120 (1 unit), 444, 412, 448 ..... | 22-25          |

**Select 1 unit from following courses:** Bus. 101, 220, 129, Sec. 401, 200, 210, 211, 230, 205, 145, 110, 120, 300, 410, 305; Meda 100, Bus. 201 (Bus. Ad. 18a) ..... 1  
Total 24-27

\*See page 82 for Business Division's Mathematics requirements.

Requirements for the degree in excess of 18 units may be counted toward General Education requirements for graduation.

General Education and other requirements for the A.A. degree: See Pages 61-62.

**Certificate Program**

Students may apply for a Legal Secretarial Certificate upon completing the A.A. degree major requirements with grades of C or better.

**Business—Management**

*Associate in Arts Degree and Certificate Programs*

The Certificate in Management can be earned in any one of four areas: Business Management, Small

Business Management, Industrial Management, and Marketing Management. The certificate will be awarded by College of San Mateo upon completion of the required courses, plus additional electives totaling a minimum of 24 units. Most of these courses carry three units of lower division college credit. The 24 units earned in the certificate program will fulfill the major requirements for an Associate in Arts degree.

The courses are all general in nature and practical in application; the program is designed for persons working at the supervisory level or for those interested in supervisory positions. An advisory committee composed of representatives from various types of business and industrial organizations has assisted the College staff in the development of the program.

Under some circumstances, parallel courses completed at other institutions may be applied toward the certificate upon submission of transcripts or official verification of records.

There are two courses which are required of all management certificates and which may be considered core courses in the sense that they are fundamental and should be taken before other courses in the program. These are: Management 100—Introduction to Business Management and Management 235—Techniques of Supervision. The Management Advisory Committee recommends that you take the required courses listed below in the order indicated.

**Business Management**

| Requirements   | Semester Units |
|--|----------------|
| Management 100, 235, 220, 245 .....  | 12             |
| <b>Select 12 units from the following:</b> Bus. 101-180; Data Proc. 110; Management 105, 110, 120, 125, 130, 135, 140, 215, 225, 245 ..... |                |
|  | 12             |
|  | Total 24       |

**Small Business Management**

| Requirements  | Semester Units |
|---|----------------|
| Management 100, 235, 245; Bus. 150 .....  | 12             |
| <b>Select 12 units from the following:</b> Actg. 100, Bus. 101, 190, 180, Bus. 201, Data Proc. 110; Management 105, 110, 120, 130, 140, 215, 220, 245 ..... |                |
|   | 12-13          |
|   | Total 24-25    |

**Industrial Management**

| Requirements  | Semester Units |
|---|----------------|
| Management 100, 210, 235, 245 .....   | 12             |
| <b>Select 12 units from the following:</b> Bus. 101; Data Proc. 110; Management 105, 110, 120, 125, 130, 135, 140, 200, 205, 215, 220 ..... |                |
|   | 12             |
|   | Total 24       |

**Marketing Management**

| Requirements  | Semester Units |
|---|----------------|
| Management 100, 235, 245; Bus. 180 .....  | 12             |
| <b>Select 12 units from the following:</b> Bus. 175, 190, 185; Data Proc. 110; Management 105, 110, 120, 125, 140, 215, 230 ..... |                |
|   | 12             |
|   | Total 24       |

**Business—  
Medical Assisting**

*Associate in Arts Degree with a Major in Medical Assisting*

Recommended High School Preparation; Written and oral communication skills, typing, biology, psychology, and anatomy.

Career Opportunities for persons trained as medical assistants occur primarily in physicians' offices and clinics. Related positions are found in hospitals, insurance companies, medical publishing firms, laboratories, and pharmaceutical firms.

To meet the major requirements for the Associate in Arts degree, the student should plan a program to include any needed prerequisites for the core courses.

| Requirements  | Semester Units |
|---|----------------|
| Biology 130 (this course fulfills the Natural Science requirement for graduation), Bus. 101 or Psych.100; Medical Assisting 100, 110, 120, 140, 150, 160, 170 ..... | 29             |
| <i>See page 61-62 for Business Division's Mathematics requirement.</i>  |                |

**Select two courses from the following:** Biology 250, 425; Bus. 101; Actg. 100, Sec. 401, 400 110, Psych. 100.

**Certificate Programs**

Students may apply for a Medical Assisting Transcriber Certificate upon completion of the following courses with grades of C or better: Sec. 110, 305 (1-4 units), Biol. 130, Bus. 100, 810, Meda. 110, 140, Meda. 190, 141 (3-4 units).

**Business—Merchandising**

**Certificate Programs**

**Merchandising—General**

Students may apply for a Merchandising—General Certificate upon completion of Business 101, 100, 170, 175, 190, 180, 641 (6 units), 810 (if required by test).



## Merchandising—Fashion

Students may apply for a Merchandising Fashion Certificate upon completion of Business 100, 170, 175, 810 or 115 or equivalent; H.E. 154, 152, 151, 113, 117, 412.

## Merchandising—Management

Students may apply for a Merchandising—Management Certificate upon completion of Business 101, 100, 170, 175, 190 or 180, 641 (6 units), 810 (if required by test), Actg. 100 or 111.

*Associate in Arts Degree with a Major in Merchandising*

By completing the Certificate Program above the General Education and other requirements for the A.A. degree, (pages 61-62), the student is eligible for both the Certificate in Merchandising and the Associate in Arts degree.

## Business—Real Estate

*Associate in Arts Degree with a Major in Real Estate*

| Requirements  | Semester Units |
|---|----------------|
| Business 100 or Mgmt. 100; Bus. 810* or 115; R.E. 100, 105 or license equivalent; R.E. 110, 121, 131, 200 (if not substituted by R.E. 100; R.E. 141 or 143) . . . . . | 18-21          |

Contact Real Estate Department for Recommended course sequence.

\*Business 810 or 115 will be waived with a percentile rating of at least 35 on the quantitative part of SCAT entrance examination, or completion of a higher mathematics course (Math. 120 or higher).

**Suggested Electives:** Actg. 111 or 100; Econ. 100-102; Arch. 100; Bus. 101, 175, 150, 201; Ins. 110; Sec. 401, 100; D.P. 100; Psys. 100.

General Education and other requirements for the A.A. degree: See Pages 61-62.

*Professional Certificate Program*

**Basic Training Required:** Business 100, 105.

**Professional Courses Required:** Prerequisite: A Real Estate Broker's or Salesman's License, or completion of R.E. 100 and 105 or equivalent, R.E. 110, 121, 131, 200 or 100, 141 or 143.

**Advanced Professional Elective Courses:** Three of the following are required: 235, 122, 132, 225, 143, 145, 215, 205, 220, 230.

**Special Professional Courses:** (These may be used for Certificate credit also.) R.E. 311, 301, 313, 303, 305.

## Business—Secretarial

*Associate in Arts Degree with a Secretarial Major*

Recommended High School Preparation: Typing, Shorthand, Business English, Business Arithmetic and Office Machines.

To meet the major requirements for the Associate in Arts degree, the student should plan a program to include any needed prerequisites for the core courses.

**Career Opportunities:** A secretary with shorthand skill may be employed to transcribe dictation given in a variety of business and industrial vocabulary. With the shorthand skill, one may qualify for a wider variety of positions.

A secretary with Machine Transcription as the major emphasis may be employed in office positions that use taped dictation in meeting the correspondence needs. Machine transcription duties require good typing skills and strong English grammar and punctuation skills in addition to a familiarity with many office duties.

Word Processors are in demand in law offices, medical facilities, engineering, architectural and construction firms, and in educational institutions and government offices, to name a few. Opportunities in business and industry are far more numerous than the number of trained operators in the field, and the need for competent personnel is expected to expand dramatically through the 1980's. Duties of the Word Processor include making decisions regarding the wording of business documents; therefore, aptitude in the fundamentals of Business English is essential.

| Requirements   | Semester Units |
|--|----------------|
| <b>Option 1—Shorthand Specialty.</b> Bus 100, 810*, Actg. 100 or 111, Sec. 401, 230, 400, 120 (1 unit), 412, 410 . . . . . | 20-23          |
| Electives from following list . . . . .  | 4              |
|  | Total 24-27    |

|   |             |
|---|-------------|
| <b>Option 2—Machine Transcription Specialty.</b> Bus. 100, 810*, Actg. 100 or 111, Sec. 401, 400, 120 (1 unit), 300 (4 units), 412, 410 . . . . . | 22-25       |
| Electives from following list . . . . .   | 2           |
|   | Total 24-27 |

|   |             |
|---|-------------|
| <b>Option 3—Word Processing Specialty.</b> Actg. 100 or 111, Bus. 100, 810*, Sec. 300 (2 units), 305 (7 units), 400, 401, 412 . . . . . | 20-23       |
| Electives from following list . . . . .   | 4           |
|   | Total 25-27 |

\*See page 82 for Business Division's Mathematics requirements.

**Electives:** Bus. 101, 129, Sec. 440, 200 (5 units), 210, 211, 230, 205, 145, 110, 120, 300, 401, 410, 305; Meda 100

Requirements for the degree in excess of 18 units may be counted toward General Education requirements for graduation.

**Certificate Program**

Students may apply for a Secretarial Certificate in each specialty (Shorthand, Machine Transcription or Word Processing) upon completion of the A.A. degree major requirements listed in the three options above. Courses must be completed with grades of C or better.

Clerical—See page 82.

Legal Secretarial—See page 83.

**Business—Transportation**

*Associate in Arts Degree with a Major in Transportation*

**Career Opportunities:** A relatively new field in business, Transportation offers an unlimited future in rail, motor, marine and air transportation, plus the field of traffic management. Numerous positions are offered in personnel, public relations, trade development, promotional services and management.

| Requirements                       | Semester Units |
|------------------------------------|----------------|
| Bus. 100, 270, 271, 274, 275 ..... | 18             |
| Actg. 111 or 100 .....             | 4              |
| Econ. 102 or Mgmt. 140 .....       | 3              |

**Select one course from the following:** Bus. 170, 272, 273, 276, 277, 201, D.P. 110.

General Education and other requirements for the A.A. degree: See pages 61-62.

**Certificate Program**

| Requirements                  | Semester Units |
|-------------------------------|----------------|
| Bus. 270, 271, 274, 275 ..... | 12             |

**Select three courses from the following:** Bus. 170, 670, 273, 276, 277, 201, D.P. 110.

**Chemistry**

*Associate in Science Degree with a Major in Chemistry*

| Requirements                       | Semester Units |
|------------------------------------|----------------|
| Chemistry 210, 220, 250, 231 ..... | 19             |

General Education and other requirements for the A.A. degree: See Pages 61-62.

**Cooperative Education**

Cooperative Education gives the student field experience which is related to the major. There are three basic programs. The Parallel Program operates concurrently with the daily studies. Through a program of work and study, the relationship between theory and practical application is established. The Alternate Semester Plan provides the student with full-time field experience for one semester. The other semester is spent in school. The new Careers Plan is for students who are working full time and taking evening classes related to their career goals. Further information is available in the Cooperative Education Office, located in the Career Development Center, Building 5.

**Cosmetology—Cosmetologist**

Completion of tenth grade or equivalent is required by State Law. Students must be 17 years of age to be eligible for State Examination.

The cosmetology program consists of 1600 hours training in theory and practical skills in all phases of beauty culture. Units are based on hours in attendance. Students may qualify for the Associate in Arts degree.

**Note:** High school students may enroll in cosmetology training at College of San Mateo in their junior or senior year by contacting their respective schools and the Cosmetology Department.

**Priorities for Admission** (1) San Mateo County residence. (2) High school graduation or equivalent; 18 years of age or older. (3) Applications will be prioritized by date and time of receipt in Bldg. 17, Rm. 169. Contact the Health and Service Careers Division, 574-6323, for application information.

**Advanced Standing** Students with previous training in licensed schools of cosmetology may be admitted to advanced standing at College of San Mateo upon admission to the program and submission of State Board records to the Cosmetology Department. However, no student will be admitted to the Cosmetology program who has completed more than 1000 hours of approved training.

*Associate in Arts Degree with a Major in Cosmetology*

| Requirements                         | Semester Units |
|--------------------------------------|----------------|
| Cosmetology 712, 722, 732, 742 ..... | 40             |
| Business 810 or 115 .....            | 3              |

**Suggested Electives:** H.E. 118; Business 101, Actg. 100; Psysc. 100; Soci. 100, Spch. 120.

General Education and other requirements for the A.A. degree: See pages 61-62.

**One-Year Certificate Program**

This program prepares the student, upon satisfactory completion of 1600 hours (grades C or better) to write the California State Board of Cosmetology examination for licensure as a cosmetologist.

| Requirements               | Semester Units |
|----------------------------|----------------|
| Cosmetology 712, 722 ..... | Variable to 18 |
| Cosmetology 732, 742 ..... | Variable to 30 |
|                            | Total 40       |

**Special Courses in Cosmetology**

Cosm. 750—Brush-up, units to be determined: Refresher course—upgrading persons who have satisfactorily completed an approved course of training with a minimum of 1600 hours, or for out-of-state Cosmetologists in preparation for California State Board of Cosmetology Examination.

Cosm. 754—Manicurist, units to be determined: 350 hours prepares a special manicurist to take the California State Board of Cosmetology Examination and subsequent employment in this field only.

Cosm. 790-791—Advanced Seminar I, II (1-1) (offered in the evening.)

**Dental Assisting**

*Associate in Science Degree with a Major in Dental Assisting*

**Admission Requirements:** To be eligible for enrollment in the Dental Assisting programs, the applicant must (1) be a high school graduate or equivalent; (2) have completed one year of high school Math or Algebra and one year of typing and English or their equivalent with a C grade or better; (3) attain placement in English 801 or eligibility for English 800; (4) be admitted to the college and have a C average in all completed college courses; (5) be admitted to the Dental Assisting program. Contact the Health and Service Careers Division for application information.

**Priorities for Admission:** (1) San Mateo County residence. (2) High school graduation or equivalent. (3) Priority ranking as established by random lottery.

| Requirements                                      | Semester Units |
|---|----------------|
| Dental Assisting 647, 711-712 through 761-762 ... | 32.5           |
| Business 810; Sec. 100 or equivalent .....        | 3-6            |

**Select three units from following:**  
 Psychology 108; Sociology 100, 300; Speech 120 ..... 3

A grade of C or better is required for all Dental Assisting courses.

General Education and other requirements for the A.A. degree: See Pages 61-62.

**One-Year Certificate**

**Admission Requirements:** To be eligible for enrollment in the Dental Assisting program, the applicant must (1) be a high school graduate or equivalent; (2) have completed one year of high school Math or Algebra and one year of typing and English or their equivalent with a C grade or better; (3) maintain placement in English 801 or eligibility for English 800; (4) be admitted to the college and have a C average in all completed college courses; (5) be admitted to the Dental Assisting program. Contact the Health and Services Careers Division for application information.

**Priorities for Admission:** (1) San Mateo County residence; (2) High school graduation or equivalent; (3) Priority ranking as established by random lottery.

| First Semester  | Semester Units |
|---|----------------|
| Dental Assisting 680, 711, 721, 731, 735, 741, 751, 761 ..... | 18.5           |

| Second Semester  | Semester Units |
|--|----------------|
| Dental Assisting 647, 688, 712, 713, 722, 732, 742, 752, 762 ..... | 18             |

**Certificates**

The College of San Mateo Dental Assisting Certificate will be awarded to all students completing Dental Assisting required courses with a grade of C or better.

Upon successful completion of either program with a grade of C or better in all courses required for the certificate, the student is eligible to take the National Certification Examination to become a Certified Dental Assistant, and the California Registration Examination to become a Registered Dental Assistant.

**Drafting Technology**

*Associate in Science Degree with a Major in Drafting Technology*

**Recommended High School Preparation:** Elementary Algebra, Mechanical Drawing. Students should check course descriptions and prerequisites, and discuss recommended sequence with counselors.

A Certificate of Completion will be granted by the College to students completing the following 20 units of drafting with an average grade of C or better.

| Requirements                               | Semester Units |
|--|----------------|
| Drafting Technology 201-202, 301-302 ..... | 20             |

**Suggested Electives:** Data Processing 110.

General Education and other requirements for the A.S. degree: See Pages 61-62.

*Certificate of Proficiency Program-Day*

**Requirements**

The same 20 units of drafting as required for the A.S. degree with no grade less than C. In addition, the following 20 units of required courses must be completed with no grade less than C, along with the Recommendation of the Drafting Department.

| <b>Requirements</b>  | <b>Semester Units</b> |
|--|-----------------------|
| Drafting Technology 711, 712, 400,<br>Elec. Tech. 110; Tech. 100, 120, 200 | 20                    |

*Associate in Science Degree with a Major in Drafting Technology, Evening Program.*

| <b>Requirements</b>   | <b>Semester Units</b> |
|---|-----------------------|
| Drafting Technology 120 or 721, 722, 731, 732,<br>740                             | 15 units              |
| Machine Tool 750 and one of the following:<br>Math 816, 130, or 219, Drafting 712 | 6-8                   |
|   | Total 21-23           |

**Suggested Electives:** Electronics 110, Physics 100.

General Education and other requirements for the A.S. degree: See pages 61-62.

*Certificate Program-Evening*

A Certificate of Completion in Drafting Technology may be issued to those students who complete the following courses with no grade lower than C.

| <b>Requirements</b>  | <b>Semester Units</b> |
|--|-----------------------|
| Drafting Technology 120 or 721; 722, 731, 732, 740<br>Electronics Technology 110; Machine Tool<br>Tech. 750; Physics 100, and one of<br>the following: Math 130, 219 | 28                    |

**Career Opportunities:** Technical draftsmen are employed in manufacturing and construction industries in the area. They should therefore be technically trained in order to be adaptable to all types of industry. Many draftsmen advance to positions in the upper levels of industry.

**Drama**

**Transfer Program**

*Associate in Arts Degree with a Major in Drama*

Drama majors should check requirements for transfer in junior standing to the college of their choice, or consult with their College of San Mateo counselor.

| <b>Requirements</b>  | <b>Semester Units</b> |
|--|-----------------------|
| Drama 101, 102, plus twelve units from<br>Drama 140, 200, 201, 230, 250, 260, 300, 371 | 18                    |

**Suggested Electives:** Drama 300, 305, 338; Lit. 151; Speech 130, 111; Physical Education — Dance, Fencing, Ballet.

General Education and other requirements for the A.A. degree: See Pages 61-62.

**Education**

**Transfer Program**

Students who are planning for a career in teaching will concentrate on meeting the General Education requirements of the college they plan to attend. The program of courses recommended for a student who plans to teach will, to a considerable degree, depend upon the credential sought and the teacher education college the student plans to attend.

Students seeking a teaching credential should carefully plan their program with the assistance of their counselor.

**Electronics Technology**

*Associate in Science Degree with a Major in Electronics Technology*

| <b>Requirements</b>  | <b>Semester Units</b> |
|--|-----------------------|
| Electronic Technology 200*, 250, 252, 260, 280,<br>300, 302, 310, 330, 350, 360, 362, 380, 666 | 43                    |

\*To meet math requirement, E.T. 230 or Math 119 or 120, must be taken concurrently with E.T. 200.

To obtain an A.S. degree in Electronics Technology, students must have a G.P.A. of 2.0 or better in the above courses required for the major.

General Education and other requirements for the A.S. degree: see Pages 61-62.

The student will be required to purchase a set of personal tools and supplies for most laboratory classes.

*Certificate Program*

The College of San Mateo will issue a Certificate of Completion to those students with a G.P.A. of 2.0 or better in the major requirements of 43 units.

The Electronics Technology Department will issue a Certificate of Proficiency to those students who successfully complete the major requirements of 43 units with a G.P.A. of 2.5 or better and no grade lower than C.

*Associate in Science Degree with a Major in Electronics Technology—Evening Program*

| Requirements  | Semester Units |
|---|----------------|
| Electronics Technology 260, 310, 710*, 720, 730, 740              | 22             |
| plus two courses from the following: E.T. 230, 280, 360, 760, 765 | 5-7            |
|   | Total 27-29    |

\*To meet the math requirement, E.T. 230 or Math 119 or 120 may be taken prior to or concurrently with E.T. 710.

General Education and other requirements for the A.S. degree: see Pages 61-62.

#### Certificate Program—Evening

An Evening College Certificate will be issued to those students who successfully complete the A.S. degree major requirements with a G.P.A. of 2.0 or better and no grade lower than C.

#### Advanced Placement—Day/Evening

Students with extensive background in electronics from military, industrial or other educational institutions, wishing to obtain advanced placement must complete a minimum of 19 units from specialization electives listed below, with a G.P.A. of 2.0 or better and no grade lower than C. To verify experience and/or course qualification, appropriate documents must be filed with the Office of Admissions and Records.

Specialization Electives: Electronics Technology 230, 260, 280, 300, 302, 310, 350, 360, 362, 380, 720, 730, 740, 765.

Cooperative Education: A maximum of four units may be substituted.

## Engineering

The basic Engineering program prepares for transfer to a four-year college or university in junior standing. Students should refer to the catalog of the college of their choice for special requirements; however, the following core subjects were approved unanimously by the Engineering Liaison Committee of the California Community Colleges, State Colleges and Universities, and the University of California.

The following courses will satisfy the Engineering Liaison Committee core program requirements: Mathematics (beginning with Analytic Geometry and Calculus and completing a course in Ordinary Differential Equations, 16 units); Chemistry (for engineers and scientists, 8 units); Physics (for engineers and scientists, 12 units); Statics (3 units); Graphics and Descriptive Geometry (3 units); Computers, digital (2 units); Orientation and Motivation (1 unit); Materials Science (3 units); Electrical Circuits and Devices (3 units); Elec-

tives to include Mathematics 162, Computer Programming (15 units).

#### Transfer Program

Associate in Science Degree with a Major in Engineering

Recommended High School Preparation; Mathematics (four years); Chemistry (one year); Physics (one year); Mechanical Drawing (one year). Students should check course descriptions and prerequisites, and discuss recommended sequence with counselors.

| Requirements                                  | Semester Units |
|---|----------------|
| Engineering 666, 200*, 220*, 230*, 260*, 270* | 15             |
| Mathematics 162, 260, 261, 262, 263, 275      | 18             |
| Chemistry 224, 225 or 210, 220                | 8-10           |
| Physics 250, 260, 270                         | 12             |

\*Plus 6 units from Engineering 111, 112; Mathematics 270; Physics 250, 260, 270; Chemistry 231.

Suggested Electives: Engineering 111; Mathematics 200, 151, 152, 270; Geology 210.

General Education and other requirements for the A.S. degree: See Pages 61-62.

\*Courses listed above are transfer requirements; those marked with an asterisk are A.S. degree requirements.

## Engineering Technology—General

Engineering Technology is that part of the engineering field which blends scientific and engineering knowledge with technical skills in research, development and production. The College offers the general education, mathematics, science, engineering, and many of the technical courses for the lower-division requirements in Engineering Technology. An articulation agreement with the state colleges and universities assures the BSET degree within two years after transfer to the four-year school.

#### Transfer Program

Associate in Science Degree with a Major in Engineering Technology

| Requirements                                  | Semester Units |
|---|----------------|
| Engineering 120, 150*, 160*, 200*, 220*, 270* | 15             |
| Mathematics 241*, 242*, 162                   | 11             |
| Chemistry 224                                 | 4              |
| Physics 210-220                               | 8              |
| Technical Elective                            | 6              |

\*Plus 6 units from area of technology specialization.



**Suggested Electives:** Technical courses; Accounting 100; Engineering 666; Mathematics 200, 151, 152.

General Education and other requirements for the A.S. degree: See Pages 61-62.

\*Courses listed above are transfer requirements; those marked with an asterisk are A.S. degree requirements.

## Engineering Technology— Electronics

### Transfer Program (Cal Poly pattern)

Associate in Science Degree with a Major in Engineering Technology—Electronics

| Requirements   | Semester Units |
|--|----------------|
| Engineering 150*, 160*, 270* .....   | 9              |
| Electronics Technology 200, 250*, 252*, 260*, 280, 300, 310*, 330, 350*, 360*, 362*, 380 .....   | 39             |
| (If evening courses ET 710, 720, 730 are substituted for corresponding day courses, additional units of technical electives must be included to make a total of 39 units.) |                |
| Mathematics 241*-242* .....  | 8              |
| Physics 210-220 .....  | 8              |
| Chemistry 224 .....  | 4              |

**Suggested Electives:** Engineering 666; Mathematics 200, 151, 152, 162.

General Education and other requirements for the A.S. degree: See Pages 61-62.

\*Courses listed above are transfer requirements. Those courses marked with an asterisk are A.S. degree requirements.

## English

Associate in Arts Degree with a Major in English

| Requirements   | Semester Units |
|--|----------------|
| 18 units from Humanities courses listed under Graduation Requirements, pages with a minimum of 9 units from English or Literature courses (other than English 110, 120, 130, 140 ..... | 18             |

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Ethnic Studies

### Transfer Program

Associate in Arts Degree with a Major in Ethnic Studies

The Ethnic Studies program is structured for the student who plans to major in the Social Sciences, Social Welfare, Humanities, Ethnic Studies or related areas in either a two-year program or as transfer to a four-year institution. Ethnic Studies courses are transferable as Social Science, Humanities, Electives or Ethnic Studies, depending upon the respective institution. In addition, Ethnic Studies courses allow public school teachers the opportunity to meet California State requirements in ethnic education. The multicultural emphasis of the department has attracted many persons currently employed in public school systems, social services and human relations, and professionals whose jobs involve interpersonal situations with multiracial groups.

| Requirements  | Semester Units |
|---|----------------|
| Ethnic Studies 101 and 102 (1a-1b) plus 12 units from the following: Ethnic Studies 300, 425, 305, 151, 152, 160, 310, 320, 350, 351, 435, 267, 150, 510, 520, 290, 450, 261, 262, 270, 275, 266, 288, 585, 645 ..... | 18             |

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Filmmaking

Associate in Arts Degree with a Major in Filmmaking

Filmmaking majors should check requirements for transfer in junior standing to the college of their choice, or consult with their College of San Mateo Counselors.

| Requirements   | Semester Units |
|--|----------------|
| Art 451, 452, 461, 462, 463, 464 and at least 6 units from Art 350, Drama 200, 260, Engl. 161, 162 ..... | 20             |

**Suggested electives:** Art 351; Drama 143.

General Education and other requirements for the A.A. degree: See pages 61-62.

## Fire Science

Associate in Science Degree with a Major in Fire Science

The Fire Science program is designed to give the student an opportunity to prepare to meet the high standards necessary in pursuing a career in fire service. It is recommended that the transfer student take the six core courses and one elective only, and concentrate in the area of general education for transfer to a junior standing in a four-year institution.

For the awarding of a degree or certificate, a grade of C or better is required in all fire science courses.

| Requirements                                      | Semester Units |
|---|----------------|
| Fire Science 700, 705, 715*, 720, 731, 755, ..... | 18             |

|  |    |
|--|----|
| Select two courses from Fire Science electives or related subjects ..... | 6  |
| Total  | 24 |

General Education and other requirements for the A.S. degree: See Pages 61-62.

*Certificate Program*

| Requirements  | Semester Units |
|---|----------------|
| Fire Science 700, 705, 715*, 720, 731, 755, and 6 units of Fire Science electives ..... | 24             |

\*In all Fire Science programs, Fire Science 715, Introduction to Fire Protection and Suppression, may not be required for those students who have three or more years of certified service as professional fire fighters. If Fire Science 715 is not required for this reason, another 3-unit Fire Science course must be substituted.

## Fire Science—Basic Fire Academy

*Certificate Program*

| Requirements                | Semester Units |
|-----------------------------|----------------|
| Fire Science 781, 782 ..... | 10             |

## Floristry

*Certificate Program*

See Horticulture Courses

## Foreign Languages

*Associate in Arts Degree with a Major in Foreign Languages*

| Requirements                    | Semester Units |
|---------------------------------|----------------|
| Foreign languages courses ..... | 18             |

**Option 1:** See specific headings for majors in French, German and Spanish; **Option 2:** Completion of level 4 in one language plus completion of 15 units in one other language (transfer courses); **Option 3:** Completion of level 4 in one foreign language, completion of level 4 in a second foreign language and completion of level 3 in a third foreign language. Note: Certain courses in Art, English, History and Philosophy may be accepted as part of the 18 units, with Language Arts Division approval.

General Education and other requirements for the A.A. degree: See Pages 61-61.

## French

*Associate in Arts Degree with a Major in French*

| Requirements                  | Semester Units |
|-------------------------------|----------------|
| French language courses ..... | 18             |

Art 103 and History 101 may be accepted with Language Arts Division approval.

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Geology

*Associate in Science Degree with a Major in Geology*

| Requirements  | Semester Units |
|---|----------------|
| Geology 210, 220; Oceanography 100; Chemistry 210 and Geology 130 or Paleontology 110 ..... | 20             |

General Education and other requirements for the A.S. degree: See Pages 61-62.

## German

*Associate in Arts Degree with a Major in German*

| Requirements  | Semester Units |
|---|----------------|
| German language courses .....   | 18             |
| English 200, History 150 and Philosophy 190 may be accepted with Language Arts Division approval. |                |

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Home Economics

**Transfer Program**

*Associate in Arts Degree with a Major in Home Economics*

The student who intends to transfer a major in Home Economics should plan a course at College of San Mateo to meet the general requirements for junior standing, as well as the lower division departmental requirements, of the specific college or university the student plans to attend. This program aids the student in dealing with the responsibilities of self, family and the professional world that affect the many hours not structured by job assignments.

For the awarding of a degree or certificate, a grade of C or better is required in all home economics courses.

| Requirements  | Semester Units |
|---|----------------|
| Home Economics 666, 310, 113, 412 plus eight additional units of H.E. courses ..... | 18             |

General Education and other requirements for the A.A. degree: See Pages 61-62.

**Career Opportunities:** A major in Home Economics will prepare a student for occupations in the field of clothing design, construction and merchandising, in foods preparation and management and in interior furnishing and consumer problems, in jobs such as airline hostess, merchandising in clothing and furniture stores, dietetic assistants in hospitals, nursing homes, as well as practical experience relevant to the daily operation of a household.

*Associate in Arts Degree with a Major in Fashion Merchandising*

The Fashion Merchandising curriculum is a study of the ready-to-wear apparel industry with consideration of the various factors (economical, political and societal change) which affect the merchandising of fashion apparel.

| Requirements   | Semester Units |
|--|----------------|
| Home Economics, 113, 117, 154, 151, 152, 412 . . . . .     | 17             |
| Business 100, 170, 175, 810 or 115 or equivalent . . . . . | 12             |

General Education and other requirements for the A.A. degree: See Pages 61-62.

*Certificate Program—Fashion Merchandising*

| Requirements   | Semester Units |
|--|----------------|
| Home Economics 113, 117, 154, 151, 152, 412 . . . . .      | 17             |
| Business 100, 170, 175, 810 or 115 or equivalent . . . . . | 12             |
| <b>Total</b>   | <b>29</b>      |

## Horticulture

Five programs in Horticulture are available to interested students. These programs, though similar, afford specific training geared to meet the individual requirement of the Horticulture student. Although these programs are designed to provide certification in Horticulture, it is possible to enroll in individual classes without regard to the certificate program. No prerequisites are required. Consult individual course listings under Horticulture. For the awarding of a degree or certificate, a grade of C or better is required in all horticulture courses.

### Horticulture—Environmental

*Associate in Science Degree with a Major in Environmental Horticulture*

| Requirements                      | Semester Units |
|-----------------------------------|----------------|
| Option 1, 2, or 3 below . . . . . | 18             |

**Suggested Electives:** Hort. 412, 320, 415, 341; Architecture 110; Accounting 100; Business 170.

General Education and other requirements for the A.S. degree: See Pages 61-62.

*Certificate Program (One-Year Day Program)*

| Requirements   | Semester Units |
|--|----------------|
| Option 1—Hort. 311-312, 315, 327, 342, 330 . . . . . | 18             |
| Option 2—Hort. 311-312, 315, 342, 330, 340 . . . . . | 18             |
| Option 3—Hort. 311-312, 315, 327, 330, 411 . . . . . | 18             |

## Horticulture—Floristry

*Certificate Program (One-Year Day Program)*

| Requirements                              | Semester Units |
|---|----------------|
| Horticulture 327, 411, 412, 415 . . . . . | 12             |

## Horticulture—Ornamental

*Associate in Science Degree with a Major in Ornamental Horticulture*

| Requirements   | Semester Units |
|--|----------------|
| Horticulture 711-712, 705, 706 plus 6 units from 771, 772, 773, 774, 775, 776 plus 18 units from Horticulture 701-702, 721-722, 731-732, 741-742 . . . . . | 36             |

General Education and other requirements for the A.S. degree: See Pages 61-62.

*Certificate Program—Evening*

| Requirements  | Semester Units |
|---|----------------|
| Horticulture 711-712, 705, 706, 771-772, or 773-774, or 775-776, plus 12 units from Horticulture 701-702, 721-722, 731-732, 741-742 . . . . . | 24             |

## Horticulture—Vocational Gardening

*Certificate Program—Evening*

| Requirements  | Semester Units |
|---|----------------|
| Horticulture 801, 802, 811, 812, 821, 822 . . . . . | 18             |

## Humanities

*Associate in Arts Degree with a Major in Humanities*

| Requirements  | Semester Units |
|---|----------------|
| Humanities 111, 112, 113, 114 . . . . .   | 12             |
| Electives chosen from the list of courses satisfying the General Education Humanities requirement. (Page 62). . . . . | 6              |
| <b>Total</b>  | <b>18</b>      |

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Journalism

Associate in Arts Degree with a Major in Journalism

| Requirements  | Semester Units |
|---|----------------|
| Journalism 110, 120, six units from Journalism 300 and 310 and six units from English or Literature courses listed under Humanities | 18             |

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Liberal Studies

Associate in Arts Degree with a Major in Liberal Studies

Students should confer with a counselor and refer to the catalog of the college of their choice for special requirements in specific fields.

| Requirements   | Semester Units |
|--|----------------|
| Eighteen units selected from the lists provided under Graduation Requirements (page 61) for Natural Sciences, Social Science, and Humanities, with at least 3 units in each area | 18             |

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Life Sciences

### Transfer Program

Recommended High School Preparation: Biology (1 year); Chemistry (1 year); Physics (1 year); Mathematics—(Algebra, 2 years; Geometry, 1 year; Trigonometry, 1 semester).

For those students wishing to major in Biological Science or Medical Science who have little or no high school preparation in one or more of the above subjects, the following courses should be completed prior to attempting courses in the major sequence: Biology 110; Chemistry 890; Math. 110 or other appropriate level of Math; Physics 100.

The programs outlined below are typical of requirements to transfer in junior standing to a four-year college or university. In order to meet the requirements of specific institutions, the students should refer to the catalog of the college of their choice.

## Life Sciences—Biological

Associate in Science Degree with a Major in Biological Sciences

(Botany, Forestry, Marine Biology, Zoology, etc.)

| Requirements  | Semester Units |
|---|----------------|
| Biology 210*, 220*, 230*                                      | 14             |
| Chemistry 210*, 220, 231, 232                                 | 16             |
| Biology Electives (excluding Biology 100 and 110)             | 12             |
| Mathematics 120, 130 (or equivalent)                          | 1-6            |
| Science Electives (Physics 210, 220) or Physics 250, 260, 270 | 8-12           |

General Education and other requirements for the A.S. degree: See Pages 61-62.

\*Courses listed above are transfer requirements. Those courses marked with an asterisk are A.S. degree requirements.

## Life Sciences—Medical

Associate in Science Degree with a Major in Medical Sciences

(Pre-Med., Pre-Dental, Pre-Vet., Medicine, etc.)

| Requirements                              | Semester Units |
|---|----------------|
| Biology 210*, 230*                        | 9              |
| Biology electives (Biology 250, 260, 240) | 4-12           |
| Chemistry 210*, 220*, 231, 232            | 15-20          |
| Mathematics 241, 242 or 260, 261, 262     | 8-12           |
| Physics 210, 220 or 250, 260, 270         | 8-12           |

General Education and other requirements for the A.S. degree: See pages 61-62.

\*Courses listed above are transfer requirements. Those courses marked with an asterisk are A.S. degree requirements.

## Life Sciences—Pre-Nursing

### Transfer Program

Associate in Science Degree with a Major in Pre-Nursing

| Requirements                                     | Semester Units |
|--|----------------|
| Biology 250*, 260*, and 245 or 240*              | 13-14          |
| Biology Elective (excluding Biology 100 and 110) | 4              |
| Chemistry 210, 220*, or 410, 420*                | 8-10           |
| Science Electives (Physics 210, 220 or 100)      | 3-8            |

\*Course listed above are transfer requirements. Those courses marked with an asterisk are A.S. degree requirements.

General Education and other requirements for the A.S. degree: See Pages 61-62.

Students should refer to the catalog of the institution at which they plan to take their formal nursing training for other specific requirements.

## Machine Tool Technology

Associate in Science Degree with a Major in Machine Tool Technology

Recommended High School Preparation: General mathematics, drafting, metals shop, and related courses. Students should check course descriptions and prerequisites and discuss recommended sequence with counselors.

| Requirements  | Semester Units |
|---|----------------|
| Machine Tool Technology 100, 110*, 111*, 120*, 121*, 210*, 211*, 220*, 221*, 230*, 700*, 710*, 720* . . . . . | 21             |
| Welding Technology 300 . . . . .  | 2              |
| Drafting 120 . . . . .  | 3              |
| Technology 120 . . . . .  | 3              |
| Electronics 110 . . . . .   | 3              |
| Sec. 100 . . . . .  | 1              |
| Data Processing 110 . . . . .   | 3              |
| Total   | 36             |

Students will be required to maintain a personal set of tools. General Education and other requirements for the A.S. degree: See Pages 61-62.

\*Short courses

### Certificate Program—Day

Students successfully completing the machine tool technology courses listed above with a G.P.A. of 2.0 or better will be eligible to receive the Certificate of Proficiency in Machine Tool Technology.

Career Opportunities: The machine tool technician is a vital figure in any manufacturing industry. He or she must work from blueprints, understand manufacturing processes, and fabricate necessary parts through the use of lathes, mills, drills, grinding, numerical-control programming and many other processes.

### Certificate Program—Evening

A Certificate of Completion may be earned by completing the following courses with a G.P.A. of 2.0 or better:

|   |          |
|---|----------|
| Machine Tool Technology 100, 690, 750, 755, 760 . . . . . | 11 units |
|---|----------|

Career Opportunities: The machine tool technician is a vital figure in any manufacturing industry. He or she must work from blueprints, understand manufacturing processes and fabricate necessary parts through the use of lathes, mills, drills, grinding, numerical-control programming and many other processes.

## Mathematics

### Transfer Program

College of San Mateo offers a wide variety of courses for students who wish to major in Mathematics, enabling them to transfer to a university or four-year college at the end of the sophomore year. Students should consult the catalog of the college of their choice for special requirements.

Recommended High School Preparation: Four years of high school level Mathematics, Physics (one year), Mechanical Drawing (one year), two or more years of a Foreign Language (German, French, or Russian).

Associate in Arts Degree or Associate in Science Degree with a Major in Mathematics.

| Requirements  | Semester Units |
|---|----------------|
| Mathematics 260, 261, 262, 263 and at least 6 units from 200, 151, 152, 162, 270, 275 . . . . . | 22             |

General Education and other requirements for the A.A. degree: See pages 61-62.

## Medical Assisting

(For Program Planning and Suggested Curricula see Business—Medical Assisting and Business—Medical Transcriber, page 84).

## Military Science (Reserve Officer's Training Corps)

Military Science is offered to qualified students on a full-time basis at College of San Mateo. Classes and leadership laboratory are conducted at San Jose State University under the supervision of the Professor of Military Science, San Jose State University.

Students may complete the first two years of Army ROTC while enrolled at College of San Mateo and qualify for enrollment in the advanced course (third and fourth year) at degree granting colleges and universities. Completion of ROTC and a baccalaureate degree qualify students for a commission in the United States Army Reserve or Regular Army.



Students may obtain enrollment forms from their counselor or the Department of Military Science, San Jose State University (telephone (408) 277-2985/2986).

## Music

### Transfer Program

#### *Associate in Arts Degree with a Major in Music*

Music majors should check requirements for transfer in junior standing to a four-year college or university. Students should refer to the catalog of their choice for specific requirements, or consult with their College of San Mateo counselor.

Music classes are also available to the general student body and members of the community for personal enrichment and to apply toward general education requirements for transfer to four-year institutions. Auditions may be required. All qualified students are invited to join a performing organization. Majors must have three semesters of performance classes.

| Requirements  | Semester Units |
|---|----------------|
| 9 units from Music 100, 101, 102, 103, 104, 131, 132, 133, 134, 150, 170; |                |
| 3 units from Music 202, 270, 275;   |                |
| 6 units from Music 170, 430, 440, 445, 450, 451, 460, 470, 480, 490       |                |
| completion of 3 semesters of Music 496;                                   |                |
| 2 units from Music 301, 302, 303, 304, 320, 340, 360, 371, 372, 402, 403  | 20             |

General Education and other requirements for the A.A. degree: Pages 61-62.

## Nursing

### Transfer Program

Students who intend to transfer to a major in Nursing should plan their course at College of San Mateo to meet the general requirements for junior standing, as well as the lower division departmental requirements, of the college or university to which they wish to transfer.

Please refer to Life Science Pre-Nursing Program in College of San Mateo catalog.

#### *Associate in Science Degree with a Major in Nursing*

The College of San Mateo Associate in Science Nursing Program provides students with opportunities for learning at the College, local hospitals and related health agencies. Clinical practice begins early in the first semester.

A graduate of this program is prepared to care for patients in homes, hospitals, clinics and doctor's offices.

Upon graduation with a grade of C or better, the candidate receives an Associate in Science degree and is eligible to write the California Board of Registered Nursing licensing examination.

### Admission Requirements:

To be eligible for enrollment in the program, the applicant must:

1. Be a high school graduate or equivalent as determined by the California Board of Registered Nursing;
2. Have completed one year of high school Algebra, Chemistry with lab, and Biology with lab or their equivalents with C grades, or above, within the last five years.
3. Meet College of San Mateo admission requirements for regular student status.
4. Have a cumulative G.P.A. of 2.5 in all college courses taken—or attain an overall 60th composite percentile on the National League for Nursing examination and attain a minimum G.P.A. of 2.5 in all nursing related courses. Contact the Nursing Department for application information.

**Priorities for Admission:** Preference will be given to (1) applicants on the basis of the greatest number of units completed in satisfaction of requirements for the A.S. Degree nursing program (as listed in the College Catalog); (2) residents of San Mateo County.

The following program shall be completed before qualifying for the licensing examination:

| Requirements  | Semester Units |
|---|----------------|
| Nursing 210, 221 and 222, 231, and 232 and 240                              | 38             |
| Biology 410, 420  | 9              |
| Psychology 100, 201; Sociology 100  | 9              |
| Speech 100 or 120; English 100  | 6              |
| Elective from Art, Drama, Music or Philosophy (see Humanities requirements) | 3              |

General Education and other requirements for the A.S. degree: See Pages 61-62.

## Nursing—Vocational

### Certificate Program

Total Program Hours: 450 lecture, 1,080 laboratory.

This program is designed to prepare the student to meet the qualifications for licensing set up by the California Board of Vocational Nurse and Psychiatric Technician Examiners. The graduate of this program is

prepared to care for patients in hospitals under the supervision of a registered nurse or licensed physician.

**Admission requirements:** To be eligible for enrollment in the program, the applicant must (1) be a high school graduate or equivalent as determined by the Board of Vocational Nurse and Psychiatric Technicians; (2) have completed courses in Mathematics and General Biology within the last 5 years with no grade less than C; (3) be admitted to the college and have a C Average in all completed college courses; (4) show satisfactory completion of English 801 or eligibility for English 800 or 100.

**Priorities for Admission:** Preference will be given to (1) applicants on the basis of the greater number of units completed in satisfaction of requirements for the Vocational Nursing Program (as listed in the college catalog); (2) residents of San Mateo County.

| Requirements                      | Semester Units |
|-----------------------------------|----------------|
| <b>First Semester (18 weeks)</b>  |                |
| Nursing 110 .....                 | 11             |
| Biology 130 .....                 | 3              |
| Psychology 100) .....             | 3              |
|                                   | Total 17       |
| <b>Second Semester (18 weeks)</b> |                |
| Nursing 120 .....                 | 13             |
| Biology 425 .....                 | 2              |
|                                   | Total 15       |
| <b>Third Semester (10 weeks)</b>  |                |
| Nursing 130 .....                 | 13             |
|                                   | Grand Total 45 |

*Associate in Arts Degree with a Major in Vocational Nursing*

| Requirements                | Semester Units |
|-----------------------------|----------------|
| Nursing 110, 120, 130 ..... | 37             |
| Biology 130, 425 .....      | 5              |
| Psychology 100 .....        | 3              |
|                             | Total 45       |

All nursing courses must be completed with a grade of C or better.

General Education and other requirements for the A.S. degree: See Pages 61-62.

## Physical Education

### Transfer Program

*Associate in Arts Degree with a Major in Physical Education*

Recommended High School Preparation; Elementary Algebra, Plane Geometry, Biology, Chemistry, compe-

tency in aquatics, rhythms and dance, individual sports and team sports.

The program outlined below is typical of requirements for a transfer in junior standing to a four-year college or university.

Students should refer to the catalog of the college of their choice for specific requirements, or consult with their College of San Mateo counselor.

| Requirements   | Semester Units |
|--|----------------|
| P.E. 100, 131 and 132, Rec. 100 and 110 plus 9 units from any activity class and/or P.E. 646 (1-3 units) ..... | 20             |

It is recommended that all P.E. majors participate on at least one varsity athletic team. (Maximum of 2 units of varsity athletics may be applied to A.A. degree.)

**Suggested Electives:** Biology, Chemistry, Anatomy, Physiology, Physics.

General Education and other requirements for the A.A. degree: See pages 61-62.

## Physical Science

### Transfer Program

*Associate in Science Degree with a Major in Physical Science*

Recommended High School Preparation; Elementary Algebra, Plane Geometry, Intermediate Algebra, Trigonometry, Chemistry, Physics.

Students should refer to the catalog of the college of their choice for specific requirements, or consult with their College of San Mateo counselor.

| Requirements  | Semester Units |
|---|----------------|
| At least one course in each of the following areas:   |                |
| Astronomy 100, 130; Chemistry 100, 410, 210; Geology 100, 410, 210; Geology 100, 210; Physics 100, 210, 250 ..... | 18             |

**Suggested Electives:** Chemistry 250, 241; Mathematics 162, 260, 261, 262, 263, 275; Meteorology 100; Physics 250, 260, 270.

General Education and other requirements for the A.S. degree: See pages 61-62.

## Physics

*Associate in Science Degree with a Major in Physics*

| Requirements                         | Semester Units |
|--------------------------------------|----------------|
| Physics 250, 260, 270 .....          | 12             |
| Mathematics 260, 261, 262, 263 ..... | 16             |

General Education and other requirements for the A.S. degree: See pages 61-62.

## Police Science

(See Administration of Justice)

## Recreation Education

### Transfer Program

Associate in Arts Degree with a Major in Recreation Education

Recommended High School Preparation: See Physical Education A.A. degree requirements.

| Requirements  | Semester Units |
|---|----------------|
| P.E. 100, 131 and 132, Rec. 100 and 110, plus 9 units of any activity class and/or P.E. 646 (1-3 units) ..... | 20             |

It is recommended that all Rec. majors participate on at least one varsity athletic team. (Maximum of 2 units of varsity athletics may be applied to A.A. degree.)

**Suggested Electives:** Biology, Chemistry, Anatomy, Physiology, Physics.

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Social Science

### Transfer Program

Associate in Arts Degree with a Major in Social Science

Social Science fields are many and varied, and include such areas as Cultural Anthropology, Economics, Ethnic Studies, Geography, History, International Relations, Philosophy, Political Science, Psychology, and Sociology.

Students should refer to the catalog of the college of their choice for special requirements.

| Requirements   | Semester Units |
|--|----------------|
| The requirements for a Social Science major will total 18 units selected from at least 3 of the following, with a minimum of 2 courses in one of the following:<br>Anthropology (not including Anthro. 125/Bio. 125); Economics (not including Econ. 123); Ethnic Studies (not including Ethn. 320, 350, 351, 510, 270, 275, 266, 288, 585); Geography (not including Geog. 100); History, Philosophy (not including Phil. 200 or 210); Political Science, Psychology (not including Psych. 121); Social Science, Sociology) ..... | 18             |

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Spanish

The program is designed to give the student a functional proficiency in the language, while at the same time preparing him or her to transfer to a four-year institution with a minor or major in Spanish.

Associate in Arts Degree with a Major in Spanish

| Requirements   | Semester Units |
|--|----------------|
| Spanish language courses .....   | 18             |
| Anthropology 110, Ethnic Studies 300, 310, 320, and History 421, 422 may be accepted with Language Arts Division approval. |                |

General Education and other requirements for the A.A. degree: See pages 61-62.

### Certificate of Proficiency

Students who feel written proof of their proficiency would be beneficial to their careers may apply for a Certificate of Proficiency in Spanish after they have completed the advanced intermediate course (Spanish 140), and a minimum of two additional units, and have passed the department tests on aural comprehensive and speaking fluency.

## Speech

Associate in Arts Degree with a Major in Speech

| Requirements                           | Semester Units |
|--|----------------|
| Speech 100, 111 or 112, 120, 130 ..... | 9              |
| Humanities Courses .....               | 9              |

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Technology

### Transfer Programs

Normally, graduates of College of San Mateo Technology Programs enter industry directly upon completion of their studies. Some graduates, however, may decide to further their collegiate education at that time or after gaining some industrial experience. Several of the state colleges offer programs to graduates of technology curriculums. The time required to complete the state college program is normally two years, at which time the graduate is awarded a Bachelor's degree. The state college curriculum in which the graduates enroll is flexible; each graduate is considered individually and courses are selected which will meet the needs and desires of the student.

Transfer curriculums which are open to College of San Mateo Technology graduates include the following:

**San Francisco State University:** Design and Industry Program.

**California Polytechnic State University:** (San Luis Obispo Campus) Industrial Technology and Industrial Arts Education.

**San Jose State University:** Industrial Studies, Industrial Design, Industrial Technology, and Industrial Arts Education.

**California State University, Fresno:** Industrial Arts and Industrial Technology.

**California State University, Long Beach:** Industrial Arts and Industrial Technology.

**California State University, Chico:** Industrial Arts and Industrial Technology.

**Cogswell College (San Francisco):** Engineering Technology

**San Diego State University:** Industrial Arts and Industrial Technology.

## Technical Art/Graphics

Associate in Arts Degree with a Major in Technical Art and Graphics

| Requirements  | Semester Units |
|---|----------------|
| Technical Art and Graphics 201-202, 210, 220, 300, 310, 351-352, 400 or Tech. 649 ..... | 33             |
| Art 202 or 328 .....  | 3              |
|   | Total 36       |

General Education and other requirements for the A.A. degree: See Pages 61-62.

### Certificate Program

A Certificate of Completion will be issued to those students with a G.P.A. of 2.0 or better in the major requirements.

Those students who successfully complete the above curriculum with a G.P.A. of 2.5 or better with no grade lower than C will receive the Certificate of Proficiency in Technical Art/Graphics.

**Career Opportunities:** There are career opportunities for artists with technical art and graphics training in many areas, including research and development centers, technical publications, manufacturing plants, state and federal bureaus, educational institutions, and advertising agencies.

## Technical Art/Graphics Graphic Communications

### Certificate Program—Evening

Graphic communications is the study of the processes, starting with the planning and creation of original art or copy through to the reproduction of the subject by the printing process. These processes involve design, composition, copy preparation, camera work, stripping, platemaking, press work and bindery.

The student may enter any of the six, eight-week mini-courses without prerequisites. Courses TA/G 710 through 714 are composed of teacher-paced cores A through F, which progress sequentially, with repetition of cores planned as intensification of facts and skills. Self-paced instructional units are provided to accelerate the students progress through each core.

Upon successful completion of TA/G 710 through 715, the student will be eligible to receive the Certificate of Proficiency in Graphic Communications.

**Career Opportunities:** Graphic reproduction technicians are employed as production artists, photo-composing operators, lithographic camera persons, stripping or flat assemblers, platemakers, offset press operators, bindery operators. There are also opportunities for sales and service persons in the related industries. Much growth has occurred in the in-plant graphics shops as well as the franchised printing outlets.

## Technical Art/Graphics Industrial Design

### Transfer Program

Students should refer to the catalog of the college of their choice for special requirements since the three California colleges approved by the Industrial Design Society of America vary considerably in their recommendations for undergraduate preparation. Typical requirements for transfer include: Art 102, 103; Biology 110; Economics 100; Physics 210, 220; Speech 100.

| Requirements                                    | Semester Units |
|---|----------------|
| Technical Art/Graphics 201, 210, 220, 310 ..... | 18             |

**Suggested Electives:** Technical Art/Graphics 351, Technology 120.

**Career Opportunities:** Industrial designers work for manufacturing companies and independent design offices. Today, nearly every manufacturer of consumer hard goods, housewares, appliances, automobiles and electronic equipment has a design staff or retains a consultant.

## Telecommunications— Broadcast Engineering

Associate in Arts Degree with a Major in Broadcast Engineering and Certificate Program

| Requirements  | Semester Units |
|---|----------------|
| Electronics 200; Telecommunications 115, 131, 190, 231, 301, 302, Data Processing 110 ..... | 27             |

General Education and other requirements for the A.A. degree: See Pages 61-62.

## Telecommunications— Radio Broadcasting

Associate in Arts Degree with a Major in Radio Broadcasting and Certificate Program

| Requirements   | Semester Units |
|--|----------------|
| Telecommunications 115, 131, 132, 190, 231 and 6 units from 110, 135, 192, 194, 195; Art 463, 464; Data Processing 110; Speech 100 ..... | 27             |

General Education and other requirements for the A.S. degree: See Pages 61-62.

## Telecommunications— Television Broadcasting

Associate in Arts Degree with a Major in Television Broadcasting and Certificate Program

| Requirements   | Semester Units |
|--|----------------|
| Telecommunications 115, 131, 190, 231, 232, 241, 242; D.P. 110 ..... | 24             |
| Telecommunications Electives .....                                   | 3              |

General Education and other requirements for the A.A. degree: See Pages 61-62.

**Career Opportunities:** The CSM Telecommunications programs—in Broadcasting Engineering, Radio Broadcasting, and Television Broadcasting—prepare graduates for many excellent positions throughout the industry. All branches of the communications industry need qualified, capable broadcasters and sound and video-control technicians. Although competition is very keen, the outlook for a future in the field is promising for the student who successfully completes any of three Telecommunications programs and meets the Federal Communications Commission licensing requirements.

Students who enroll in Telecommunications programs receive instruction in the theoretical aspects of

the field, and have an additional, important opportunity of working in and with live facilities. Through actual on-the-air broadcasts from the campus stations, KCSM-FM and KCSM-TV, students receive practical experience that provides excellent preparation for immediate employment—or, if they prefer, for transfer to a four-year program.

## Trade and Industrial Courses

Classes of related training are offered for apprentices in certain trades as indicated in the section on curriculum for Trade and Industrial courses. These classes follow the course outlined by the State Bureau of Apprenticeship Standards.

## Vocational Gardening

Certificate Program

See Horticulture Courses.

## Welding Technology

Associate in Science Degree with a Major in Welding Technology

Recommended High School preparation: Elementary Algebra, Physics, Mechanical Drawing.

| Requirements   | Semester Units |
|--|----------------|
| Welding Technology: 100*, 110, 111, 120, 121, 210, 211, 220, 221 ..... | 35             |
| Drafting 120, Tech. 100 or Physics 100, Tech. 200 ..                   | 10             |
| Electronics 110 .....  | 3              |
|  | Total 48       |

\*Any three-unit math course, Math. 110 or higher, or Business 115 may be substituted for W.T. 100.

General Education and other requirements for the A.A. degree: See Pages 61-62.

Students will be required to purchase personal safety equipment and adhere to all safety rules.

Those students who successfully complete the above curriculum with a G.P.A. of 3.0 or better will be eligible to receive the Certificate of Proficiency in Welding Technology.

**Career Opportunities:** The field of welding offers employment in automotives, aircraft, guided missiles, nuclear energy, railroads, radio, television, appliances, department stores and food processing plants. The welding technician can join, separate and remove excess metals with various techniques, and is able to work with ferrous, non-ferrous and exotic metals using TIG and MIG processes. The welding technician is the liaison between the welding engineer and the welder.



## Women's Studies

The College of San Mateo currently offers Women's Studies courses in various academic disciplines. These include History 260: Women in American History (3 units), which surveys the accomplishments of American women from colonial times to the present. The roles played by American women of different racial and local origins are explored in depth. Psychology 250: Psychology of Women (3 units) examines, within a framework of standard psychological concepts, the ways in which culture influences feminine and masculine role behavior. Literature 251: Women and Literature (3 units) investigates the images of women in English and American literature and introduces students to important contemporary women writers. Pol. Sci. 255: Women, Politics & Power (3 units) examines

the changing role of women in the American political process. Career & Personal Development 808 (1-3 units) analyzes the student's present abilities and interests, develops college-level study skills, examines career opportunities for women, and provides academic and career counseling in a milieu supportive of women.

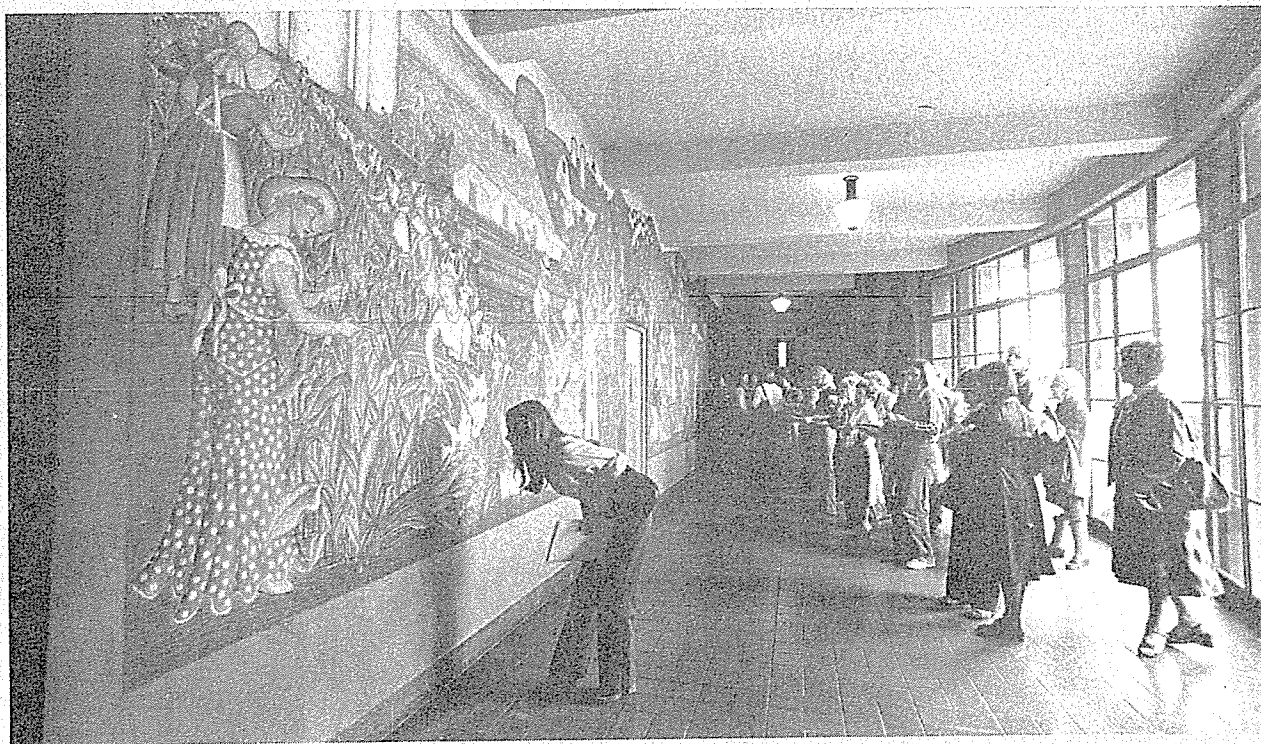
An academic major in Women's Studies is now available at some four-year colleges and universities. Students interested in majoring in Women's Studies should consult the catalog of the college of their choice for detailed information. In addition, the College of San Mateo offers a College Re-Entry Program for women whose formal education has been interrupted or postponed. (See page 55.)



# Description of Course

San Francisco Heritage Class  
See story on following page





## SOCIAL SCIENCE

The nozzle-shaped memorial to San Francisco's legendary fireman is more than an attractive spot from which to view the San Francisco Bay. As at other stops made by students in the popular class, "The Cultural Heritage of San Francisco," landmarks such as Coit Tower reveal a rich local past peopled by civic-minded, but sometimes eccentric characters.

Joining the city's many tourists who also come here for a special learning experience, CSM students eagerly troop through reminders of the unique amalgam of entrepreneurship, politics, civic disasters, and high culture in the Golden Gate City. Under the tutelage of historian and opera buff Stuart Cooke, students also visit City Hall and Civic Center, the Opera House, the city's historical hotels, the gingerbread Victorian homes that sprang up before the great fire, and the Oakland Museum with its collection of paintings depicting San Francisco scenes from a hundred years ago.

This colorful course is part of the College's recently launched Humanities Program which is in part funded by a grant from the National Endowment for the Humanities. An interdisciplinary approach forms the basis for the series which is designed to acquaint students of varied backgrounds—liberal arts, science, technical and business—with an integrated, comprehensive view of Western culture undergoing great technological change.

Students of all ages are finding the classes relevant, apparently, as enrollments continue to grow. Typical of student comments is one by Kevin Ellis, enrolled in "From Greece to Renaissance" who said, "For the student who would like to get a broad spectrum, but who doesn't have time to take individual classes in subjects such as philosophy, art, music and history, this class is ideal." For Sharon Hagarty, a student in "Technology, Contemporary Society, and Human Values," the class was "much more than I expected. I didn't realize how closely these areas are related."

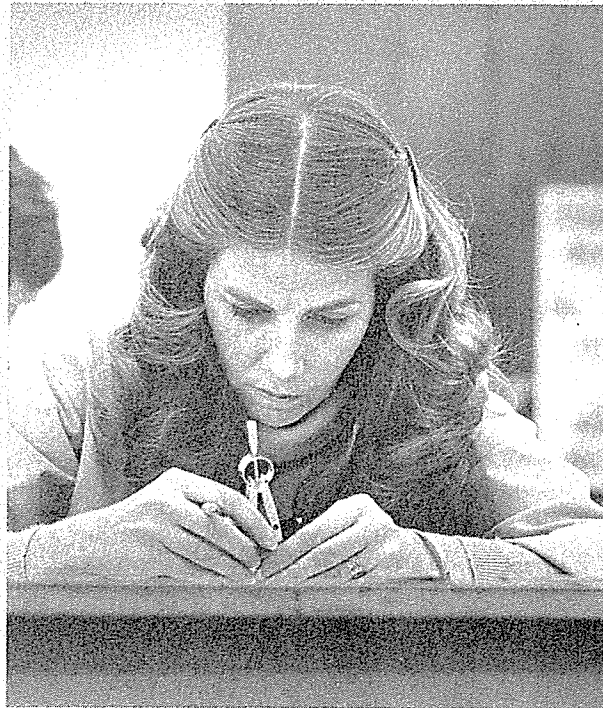
Among other Social Science courses offering learning in a non-traditional mode is "History of San Mateo County". Utilizing the San Mateo County Historical Museum, situated on the CSM campus, students may research historical documents firsthand. On one of their field trips students trace the steps of the Spanish explorer Portola as he climbed to the top of Sweeney Ridge for his first unsuspecting glimpse of San Francisco Bay. Other tours include a walk through the linear accelerator at Stanford and the nineteenth century gardens of the Filoli estate in Woodside.

Another class of special interest is "Experimental Psychology," primarily a lab course in which students apply scientific inquiry to answer questions in psychology. Using a variety of specialized equipment in their experiments students uncover truths about themselves and others in areas such as stress management, reaction time, and memory.

## Courses of Instruction Information Regarding Course Additions for 1980-81

### New Course Title, Number and Name

- Administration of Justice 300** Introduction to Industrial & Retail Security  
**Administration of Justice 350** Introduction to Corrections  
**Astronomy 101** Astronomy Laboratory  
**Astronomy 102** Readings in Astronomy  
**Business 279** Import/Export Management  
**Drama 371** Children's Theatre  
**English 313** English for Non-native Speakers III  
**English 314** English for Limited English Speakers  
**English 420** Writing for Industry  
**Medical Assisting 141** Medical Transcription, Advanced  
**Medical Assisting 190** Introduction to Pharmacology  
**Physical Education: Aquatics 105**, Advanced Swimming; **Fitness 305**, Jogging & Par Course; **Fitness 309**, Early Bird Fitness & Jogging; **Fitness 345**, Advanced Massage; **Individual Sports 210**, Paddleball; **Individual Sports 223**, Intermediate Racquetball  
**Spanish 133** Spanish for Native Speakers



Courses are offered at the discretion of the college in accordance with its determination of educational needs and available resources.

Some four-year colleges will accept, as transfer credit, units earned in any course offered at College of San Mateo, with the exception of remedial courses. Other colleges will accept only those courses which are equivalent to courses taught at those institutions. Students should consult with their counselor regarding particular transfer institutions.

The credit value of each course in semester units is indicated by a numeral in parenthesis following the title. A semester unit of credit is based upon one hour of the student's time at the College per week in lecture or recitation throughout one semester, together with the necessary preparation time, or a longer time in

laboratory or other exercises not requiring outside preparation.

Specific information concerning class hours will be found in the Schedule of Classes.

Students should check course descriptions and prerequisites, and discuss the recommended sequence with counselors/advisors.

**NOTE:** In order to establish a common numbering system for the three District colleges, Cañada College, Skyline College and College of San Mateo, new course number designators became effective in September of 1979. Each consists of a series of not more than four characters followed by three digits. In the course descriptions section of the Catalog, the new descriptors are immediately followed by the old course numbers enclosed in parentheses. You will find a cross reference listing of former course numbers and their new equivalents on the following pages.

### Cross Reference List of Former Course Numbers to New Course Numbers

Former Number      New Number

|      |     |      |     |
|------|-----|------|-----|
| ADMJ | 1   | ADMJ | 100 |
| ADMJ | 2   | ADMJ | 102 |
| ADMJ | 3   | ADMJ | 104 |
| ADMJ | 4   | ADMJ | 106 |
| ADMJ | 5   | ADMJ | 108 |
| ADMJ | 7   | ADMJ | 120 |
| ADMJ | 10  | ADMJ | 125 |
| ADMJ | 12  | ADMJ | 150 |
| ADMJ | 15A | ADMJ | 140 |
| ADMJ | 15B | ADMJ | 141 |
| ADMJ | 15C | ADMJ | 142 |
| ADMJ | 17  | ADMJ | 165 |
| ADMJ | 19  | ADMJ | 153 |
| ADMJ | 25  | ADMJ | 170 |
| ADMJ | 47  | ADMJ | 647 |
| ADMJ | 48  | ADMJ | 680 |
| ADMJ | 49  | ADMJ | 690 |
| ADMJ | 94  | ADMJ | 755 |
| ADMJ | 96A | ADMJ | 760 |
| ADMJ | 96B | ADMJ | 761 |
| ADMJ | 96C | ADMJ | 762 |
| ADMJ | 98  | ADMJ | 766 |
| ADMJ | 99A | ADMJ | 771 |
| ADMJ | 99B | ADMJ | 772 |
| ADMJ | 99C | ADMJ | 773 |
| ADMJ | 767 | ADMJ | 767 |
| AERO | 2A  | AERO | 100 |
| AERO | 2B  | AERO | 101 |
| AERO | 2C  | AERO | 102 |
| AERO | 3   | AERO | 103 |
| AERO | 5   | AERO | 115 |
| AERO | 6   | AERO | 126 |
| AERO | 7   | AERO | 137 |
| AERO | 11  | AERO | 141 |
| AERO | 12  | AERO | 142 |
| AERO | 13  | AERO | 143 |
| AERO | 14  | AERO | 144 |
| AERO | 15  | AERO | 145 |
| AERO | 16  | AERO | 156 |
| AERO | 47  | AERO | 649 |
| AERO | 48  | AERO | 680 |
| AERO | 49  | AERO | 690 |
| AERO | 51  | AERO | 300 |
| AERO | 52  | AERO | 310 |
| AERO | 53  | AERO | 320 |
| AERO | 54  | AERO | 330 |
| AERO | 55  | AERO | 340 |
| AERO | 56  | AERO | 350 |

| Former Number | New Number | Former Number | New Number |
|---------------|------------|---------------|------------|
| AERO          | 57         | AERO          | 360        |
| AERO          | 58         | AERO          | 370        |
| AERO          | L51        | AERO          | 301        |
| AERO          | L52        | AERO          | 311        |
| AERO          | L53        | AERO          | 321        |
| AERO          | L54        | AERO          | 331        |
| AERO          | L55        | AERO          | 341        |
| AERO          | L56        | AERO          | 351        |
| AERO          | L57        | AERO          | 361        |
| AERO          | L58        | AERO          | 371        |
| ANTH          | 1          | ANTH          | 125        |
| ANTH          | 2          | ANTH          | 110        |
| ANTH          | 3          | ANTH          | 130        |
| ANTH          | 4          | ANTH          | 140        |
| ANTH          | 8          | ANTH          | 310        |
| ANTH          | 18         | ANTH          | 180        |
| ANTH          | 48         | ANTH          | 680        |
| ANTH          | 49         | ANTH          | 690        |
| ARCH          | 1A         | ARCH          | 112        |
| ARCH          | 4          | ARCH          | 666        |
| ARCH          | 7A         | ARCH          | 114        |
| ARCH          | 7B         | ARCH          | 115        |
| ARCH          | 10         | ARCH          | 100        |
| ARCH          | 11         | ARCH          | 120        |
| ARCH          | 12         | ARCH          | 130        |
| ARCH          | 13         | ARCH          | 125        |
| ARCH          | 14         | ARCH          | 110        |
| ARCH          | 15A        | ARCH          | 140        |
| ARCH          | 15B        | ARCH          | 145        |
| ARCH          | 16         | ARCH          | 150        |
| ARCH          | 17         | ARCH          | 160        |
| ARCH          | 18         | ARCH          | 170        |
| ARCH          | 21         | ARCH          | 210        |
| ARCH          | 22         | ARCH          | 220        |
| ARCH          | 23         | ARCH          | 230        |
| ARCH          | 24         | ARCH          | 240        |
| ARCH          | 47         | ARCH          | 644        |
| ARCH          | 48         | ARCH          | 680        |
| ARCH          | 49         | ARCH          | 690        |
| ARCH          | 115        | ARCH          | 340        |
| ARCH          | 120        | ARCH          | 341        |
| ART           | 1A         | ART           | 101        |
| ART           | 1B         | ART           | 102        |
| ART           | 1C         | ART           | 103        |
| ART           | 1D         | ART           | 105        |
| ART           | 1E         | ART           | 106        |
| ART           | 1F         | ART           | 108        |
| ART           | 2A         | ART           | 201        |
| ART           | 2B         | ART           | 202        |
| ART           | 3          | ART           | 214        |
| ART           | 4          | ART           | 320        |
| ART           | 5A         | ART           | 301        |
| ART           | 5B         | ART           | 305        |
| ART           | 6A         | ART           | 223        |
| ART           | 6B         | ART           | 224        |
| ART           | 7A         | ART           | 231        |
| ART           | 7B         | ART           | 232        |
| ART           | 10A        | ART           | 111        |
| ART           | 10B        | ART           | 112        |
| ART           | 12         | ART           | 310        |
| ART           | 15         | ART           | 207        |
| ART           | 17A        | ART           | 237        |
| ART           | 17B        | ART           | 238        |
| ART           | 20A        | ART           | 411        |
| ART           | 20B        | ART           | 412        |
| ART           | 21A        | ART           | 415        |
| ART           | 21B        | ART           | 416        |
| ART           | 22         | ART           | 405        |
| ART           | 23         | ART           | 406        |
| ART           | 25A        | ART           | 413        |
| ART           | 25B        | ART           | 414        |
| ART           | 40         | ART           | 350        |
| ART           | 41A        | ART           | 351        |
| ART           | 41B        | ART           | 352        |
| ART           | 41C        | ART           | 353        |
| ART           | 43A        | ART           | 354        |
| ART           | 43B        | ART           | 355        |
| ART           | 47         | ART           | 641        |
| ART           | 48         | ART           | 680        |
| ART           | 49         | ART           | 690        |
| ART           | 51         | ART           | 328        |
| ART           | 52         | ART           | 206        |
| ART           | 62A        | ART           | 241        |
| ART           | 62B        | ART           | 242        |
| ART           | 68A        | ART           | 141        |
| ART           | 68B        | ART           | 142        |
| ART           | 70         | ART           | 336        |
| ART           | 80         | ART           | 157        |
| ART           | 81         | ART           | 145        |
| ART           | 82         | ART           | 147        |
| ART           | 83         | ART           | 146        |
| ART           | 84         | ART           | 148        |
| ART           | 85A        | ART           | 151        |
| ART           | 85B        | ART           | 152        |
| ART           | 87         | ART           | 450        |
| ART           | 88         | ART           | 155        |
| ART           | 89         | ART           | 156        |
| ASTR          | 1          | ASTR          | 130        |
| ASTR          | 7          | ASTR          | 107        |
| ASTR          | 10         | ASTR          | 100        |
| ASTR          | 15         | ASTR          | 110        |
| ASTR          | 16         | ASTR          | 120        |
| ASTR          | 48         | ASTR          | 680        |
| ASTR          | 49         | ASTR          | 690        |
| BIOL          | 1          | BIOL          | 100        |
| BIOL          | 2          | BIOL          | 110        |
| BIOL          | 3          | BIOL          | 145        |
| BIOL          | 4          | BIOL          | 314        |



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Courses of Instruction (continued) 105

| Former Number | New Number | Former Number | New Number | Former Number | New Number |
|---------------|------------|---------------|------------|---------------|------------|
| BIOL 5        | BIOL 106   | BUS 8A        | BUS. 101   | BUS 84        | R.E. 105   |
| BIOL 7        | BIOL 130   | BUS 8B        | BUS. 102   | BUS 85        | R.E. 110   |
| BIOL 8        | BIOL 320   | BUS 10        | BUS. 100   | BUS 87        | R.E. 121   |
| BIOL 9        | BIOL 140   | BUS 11        | BUS. 170   | BUS 88        | R.E. 131   |
| BIOL 11       | BIOL 125   | BUS 12        | BUS. 175   | BUS 90L       | SEC. 250   |
| BIOL 12       | BIOL 137   | BUS 15        | BUS. 154   | BUS 90P       | SEC. 205   |
| BIOL 14       | BIOL 184   | BUS 16        | BUS. 190   | BUS 91        | SEC. 400   |
| BIOL 15       | BIOL 102   | BUS 17        | BUS. 152   | BUS 93        | BUS. 129   |
| BIOL 16       | BIOL 180   | BUS 18        | BUS. 151   | BUS 94        | SEC. 300   |
| BIOL 17       | BIOL 182   | BUS 24        | BUS. 180   | BUS 94L       | SEC. 444   |
| BIOL 18A      | BIOL 325   | BUS 25        | BUS. 185   | BUS 96        | SEC. 412   |
| BIOL 18B      | BIOL 326   | BUS 30        | MGMT 300   | BUS 99        | SEC. 495   |
| BIOL 19       | BIOL 327   | BUS 31        | MGMT 301   | BUS 100A      | SEC. 410   |
| BIOL 21       | BIOL 210   | BUS 32        | MGMT 303   | BUS 100B      | SEC. 418   |
| BIOL 22       | BIOL 220   | BUS 35        | BUS. 130   | BUS 100L      | SEC. 448   |
| BIOL 23       | BIOL 250   | BUS 45        | BUS. 412   | BUS 102       | SEC. 305   |
| BIOL 24       | BIOL 260   | BUS 47        | BUS. 641   | BUS 111       | R.E. 235   |
| BIOL 25       | BIOL 240   | BUS 47        | ACTG 641   | BUS 112       | R.E. 122   |
| BIOL 26       | BIOL 245   | BUS 47        | SEC. 641   | BUS 113       | R.E. 132   |
| BIOL 27       | BIOL 230   | BUS 47        | INS. 641   | BUS 114       | R.E. 225   |
| BIOL 30       | BIOL 150   | BUS 47        | R.E. 641   | BUS 123       | BUS. 160   |
| BIOL 33       | BIOL 160   | BUS 47        | MGMT 641   | BUS 131       | R.E. 200   |
| BIOL 37       | BIOL 370   | BUS 48        | BUS. 680   | BUS 134       | R.E. 141   |
| BIOL 40A      | BIOL 112   | BUS 49        | BUS. 690   | BUS 135       | R.E. 143   |
| BIOL 40B      | BIOL 113   | BUS 50        | BUS. 810   | BUS 136       | R.E. 145   |
| BIOL 40C      | BIOL 114   | BUS 51        | BUS. 115   | BUS 138       | R.E. 210   |
| BIOL 40D      | BIOL 115   | BUS 52        | BUS. 220   | BUS 139       | R.E. 215   |
| BIOL 40E      | BIOL 116   | BUS 56        | SEC. 401   | BUS 140       | R.E. 205   |
| BIOL 40F      | BIOL 117   | BUS 59L       | SEC. 440   | BUS 141       | R.E. 220   |
| BIOL 40G      | BIOL 118   | BUS 65        | BUS. 150   | BUS 142       | R.E. 230   |
| BIOL 40H      | BIOL 119   | BUS 66        | ACTG 100   | BUS 145A      | R.E. 311   |
| BIOL 41       | BIOL 410   | BUS 67        | ACTG 105   | BUS 145B      | R.E. 301   |
| BIOL 42       | BIOL 420   | BUS 69A       | ACTG 171   | BUS 145C      | R.E. 313   |
| BIOL 47       | BIOL 644   | BUS 69B       | ACTG 172   | BUS 145D      | R.E. 303   |
| BIOL 48       | BIOL 680   | BUS 70        | BUS. 270   | BUS 145E      | R.E. 305   |
| BIOL 49       | BIOL 690   | BUS 71        | BUS. 271   | BUS 90.1      | SEC. 200   |
| BIOL 52       | BIOL 425   | BUS 72        | BUS. 272   | BUS 90.3      | SEC. 210   |
| BLDG 48       | BLDG 680   | BUS 73        | BUS. 273   | BUS 90.4      | SEC. 211   |
| BLDG 63A      | BLDG 700   | BUS 74        | BUS. 274   | BUS 90.5      | SEC. 230   |
| BLDG 63B      | BLDG 710   | BUS 75        | BUS. 275   | BUS 92.1      | SEC. 100   |
| BLDG 63C      | BLDG 720   | BUS 76        | BUS. 276   | BUS 92.2      | SEC. 145   |
| BLDG 63D      | BLDG 730   | BUS 77        | BUS. 277   | BUS 92.5      | SEC. 110   |
| BLDG 63E      | BLDG 740   | BUS 80A       | INS. 110   | BUS 92.8      | SEC. 120   |
| BLDG 63F      | BLDG 750   | BUS 80B       | INS. 120   | BUS 92.9      | SEC. 320   |
| BUAD 1A       | ACTG 111   | BUS 80C       | INS. 130   | CA&S 1        | H.EC 301   |
| BUAD 1B       | ACTG 112   | BUS 80D       | INS. 140   | CA&S 2        | H.EC 302   |
| BUAD 1C       | ACTG 113   | BUS 80E       | INS. 150   | CA&S 3        | H.EC 303   |
| BUAD 18A      | BUS. 201   | BUS 80F       | INS. 160   | CA&S 5        | H.EC 666   |
| BUAD 18B      | BUS. 202   | BUS 80G       | INS. 170   | CA&S 6        | H.EC 320   |
| BUAD 18C      | BUS. 204   | BUS 80H       | INS. 180   | CA&S 9        | H.EC 310   |
| BUAD 20       | ACTG 195   | BUS 80J       | INS. 190   | CA&S 15       | H.EC 154   |
| BUAD 48       | ACTG 680   | BUS 80K       | INS. 200   | CA&S 17       | H.EC 152   |
| BUAD 49       | ACTG 690   | BUS 81        | BUS. 140   | CA&S 18       | H.EC 151   |
| BUS 2         | BUS. 123   | BUS 83A       | R.E. 100   | CA&S 20       | H.EC 110   |

ADMISSIONS AND REGISTRATION  
 COLLEGE OF SAN MATEO  
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 SAN MATEO, CALIFORNIA 94402

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|---------------|------------|---------------|------------|---------------|------------|
| CA&S 21       | H.EC 116   | C PE 2        | FITN 130   | COOP 50A      | COOP 601   |
| CA&S 22       | H.EC 113   | C PE 2        | FITN 201   | COOP 50B      | COOP 602   |
| CA&S 24       | H.EC 117   | C PE 2        | FITN 170   | COOP 641      | COOP 641   |
| CA&S 26       | H.EC 118   | C PE 2        | FITN 100   | COOP 642      | COOP 642   |
| CA&S 40       | H.EC 450   | C PE 2        | INDV 201   | COOP 643      | COOP 643   |
| CA&S 45       | H.EC 412   | C PE 2        | INDV 330   | COOP 644      | COOP 644   |
| CA&S 46       | H.EC 155   | C PE 2        | AQUA 310   | COOP 646      | COOP 646   |
| CA&S 47       | H.EC 647   | C PE 2        | AQUA 300   | COOP 647      | COOP 647   |
| CA&S 48       | H.EC 680   | C PE 2        | FITN 120   | COOP 648      | COOP 648   |
| CA&S 48       | H.EC 312   | C PE 2        | FITN 110   | COOP 649      | COOP 649   |
| CA&S 49       | H.EC 690   | C PE 2        | AQUA 401   | COSM 47       | COSM 647   |
| CA&S 52       | H.EC 305   | C PE 7        | VARS 180   | COSM 48       | COSM 680   |
| C PE 2        | INDV 123   | C PE 10       | VARS 140   | COSM 49       | COSM 690   |
| C PE 2        | INDV 253   | C PE 11       | VARS 160   | COSM 50       | COSM 722   |
| C PE 2        | INDV 170   | C PE 40       | P.E. 100   | COSM 50       | COSM 712   |
| C PE 2        | INDV 125   | C PE 43A      | P.E. 131   | COSM 51       | COSM 732   |
| C PE 2        | INDV 110   | C PE 43B      | P.E. 132   | COSM 51       | COSM 742   |
| C PE 2        | INDV 255   | C PE 47       | P.E. 646   | COSM 52       | COSM 750   |
| C PE 2        | INDV 161   | C PE 48       | AQUA 680   | COSM 53       | COSM 754   |
| C PE 2        | INDV 320   | C PE 48       | COMB 680   | COSM 90A      | COSM 791   |
| C PE 2        | INDV 251   | C PE 48       | FITN 343   | COSM 90B      | COSM 792   |
| C PE 2        | INDV 220   | C PE 48       | P.E. 680   | COSM 91       | COSM 760   |
| C PE 2        | INDV 150   | C PE 48       | TEAM 680   | DANC 5        | DANC 180   |
| C PE 2        | AQUA 130   | C PE 48       | INDV 680   | DANC 6        | DANC 360   |
| C PE 2        | AQUA 120   | C PE 48       | FITN 680   | DANC 8        | DANC 148   |
| C PE 2        | AQUA 109   | C PE 48       | VARS 680   | DANC 10       | DANC 380   |
| C PE 2        | AQUA 100   | C PE 49       | AQUA 690   | DANC 12A      | DANC 141   |
| C PE 2        | TEAM 115   | C PE 49       | COMB 690   | DANC 12B      | DANC 143   |
| C PE 2        | P.E. 200   | C PE 49       | P.E. 690   | DANC 13A      | DANC 121   |
| C PE 2        | TEAM 145   | C PE 49       | TEAM 690   | DANC 13B      | DANC 122   |
| C PE 2        | TEAM 200   | C PE 49       | FITN 690   | DANC 14       | DANC 130   |
| C PE 2        | TEAM 111   | C PE 49       | VARS 690   | DANC 20A      | DANC 411   |
| C PE 2        | TEAM 175   | C PE 49       | INDV 690   | DANC 20B      | DANC 412   |
| C PE 2        | TEAM 140   | CHEM 1A       | CHEM 210   | DANC 47       | DANC 642   |
| C PE 2        | TEAM 173   | CHEM 1B       | CHEM 220   | DANC 48       | DANC 680   |
| C PE 2        | TEAM 171   | CHEM 5        | CHEM 250   | DANC 49       | DANC 690   |
| C PE 2        | TEAM 151   | CHEM 7        | CHEM 260   | DATA 20       | D.P. 195   |
| C PE 2        | FITN 341   | CHEM 10       | CHEM 100   | DATA 25       | D.P. 162   |
| C PE 2        | FITN 333   | CHEM 11A      | CHEM 224   | DATA 47       | D.P. 641   |
| C PE 2        | FITN 218   | CHEM 11B      | CHEM 225   | DATA 48       | D.P. 680   |
| C PE 2        | FITN 300   | CHEM 12A      | CHEM 231   | DATA 49       | D.P. 690   |
| C PE 2        | COMB 201   | CHEM 12B      | CHEM 232   | DATA 50       | D.P. 110   |
| C PE 2        | COMB 101   | CHEM 21       | CHEM 101   | DATA 51       | D.P. 130   |
| C PE 2        | COMB 104   | CHEM 22       | CHEM 102   | DATA 52       | D.P. 140   |
| C PE 2        | FITN 331   | CHEM 23       | CHEM 103   | DATA 53A      | D.P. 151   |
| C PE 2        | FITN 212   | CHEM 24       | CHEM 104   | DATA 53B      | D.P. 152   |
| C PE 2        | FITN 211   | CHEM 25       | CHEM 105   | DATA 54       | D.P. 160   |
| C PE 2        | INDV 257   | CHEM 26       | CHEM 106   | DATA 55       | D.P. 170   |
| C PE 2        | INDV 121   | CHEM 27       | CHEM 107   | DATA 56       | D.P. 180   |
| C PE 2        | INDV 142   | CHEM 30A      | CHEM 410   | DATA 97       | D.P. 120   |
| C PE 2        | INDV 101   | CHEM 30B      | CHEM 420   | DATA 106      | D.P. 695   |
| C PE 2        | INDV 122   | CHEM 48       | CHEM 680   | DENT 47       | DENT 647   |
| C PE 2        | FITN 210   | CHEM 49       | CHEM 690   | DENT 48       | DENT 680   |
| C PE 2        | FITN 203   | CHEM 51       | CHEM 890   | DENT 49       | DENT 690   |

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|---------------|------------|---------------|------------|---------------|------------|
| DENT 51A      | DENT 711   | ECON 20C      | ECON 663   | ENGG 46       | ENGR 700   |
| DENT 51B      | DENT 712   | ECON 45       | ECON 412   | ENGG 47       | ENGR 644   |
| DENT 51C      | DENT 713   | ECON 48       | ECON 680   | ENGG 48       | ENGR 680   |
| DENT 52A      | DENT 721   | ECON 49       | ECON 690   | ENGG 49       | ENGR 690   |
| DENT 52B      | DENT 722   | ECON 51       | ECON 880   | ENGG 90A      | ENGR 411   |
| DENT 53A      | DENT 731   | EDUC 1        | EDUC 100   | ENGG 90B      | ENGR 412   |
| DENT 53B      | DENT 732   | EDUC 47       | EDUC 647   | ENGG 91       | ENGR 421   |
| DENT 54A      | DENT 741   | EDUC 48       | EDUC 680   | ENGG 92       | ENGR 422   |
| DRAF 49       | DRAF 690   | EDUC 49       | EDUC 690   | ENGL A        | ENGL 800   |
| DRAF 51A      | DRAF 711   | ELEC 10       | ELEC 100   | ENGL 2        | ENGL 165   |
| DRAF 51B      | DRAF 712   | ELEC 14       | ELEC 110   | ENGL 3        | ENGL 195   |
| DRAF 52A      | DRAF 201   | ELEC 32       | ELEC 666   | ENGL 9A       | ENGL 161   |
| DRAF 52B      | DRAF 202   | ELEC 48       | ELEC 680   | ENGL 9B       | ENGL 162   |
| DRAF 62A      | DRAF 301   | ELEC 49       | ELEC 690   | ENGL 11       | ENGL 100   |
| DRAF 62B      | DRAF 302   | ELEC 51       | ELEC 230   | ENGL 12A      | ENGL 110   |
| DRAF 63       | DRAF 400   | ELEC 52       | ELEC 200   | ENGL 12B      | ENGL 120   |
| DRAF 102A     | DRAF 721   | ELEC 53       | ELEC 280   | ENGL 12C      | ENGL 130   |
| DRAF 102B     | DRAF 722   | ELEC 62       | ELEC 250   | ENGL 12D      | ENGL 140   |
| DRAF 112A     | DRAF 731   | ELEC 63       | ELEC 380   | ENGL 13       | ENGL 210   |
| DRAF 112B     | DRAF 732   | ELEC 63       | ELEC 330   | ENGL 14       | ENGL 200   |
| DRAF 122      | DRAF 740   | ELEC 64       | ELEC 260   | ENGL 15A      | LIT. 461   |
| DRAF 130      | DRAF 750   | ELEC 65       | ELEC 775   | ENGL 15B      | LIT. 462   |
| DRMA 1A       | DRAM 101   | ELEC 70       | ELEC 765   | ENGL 16A      | LIT. 451   |
| DRMA 1B       | DRAM 102   | ELEC 71       | ELEC 302   | ENGL 16B      | LIT. 452   |
| DRMA 10       | DRAM 140   | ELEC 72       | ELEC 300   | ENGL 20       | LIT. 430   |
| DRMA 12       | DRAM 260   | ELEC 72       | ELEC 252   | ENGL 21       | LIT. 111   |
| DRMA 13       | DRAM 250   | ELEC 73       | ELEC 310   | ENGL 22       | LIT. 105   |
| DRMA 14A      | DRAM 200   | ELEC 73       | ELEC 360   | ENGL 23       | LIT. 115   |
| DRMA 14B      | DRAM 201   | ELEC 82       | ELEC 350   | ENGL 24       | LIT. 143   |
| DRMA 14C      | DRAM 202   | ELEC 83       | ELEC 362   | ENGL 25       | LIT. 151   |
| DRMA 14D      | DRAM 203   | ELEC 102      | ELEC 710   | ENGL 26       | LIT. 113   |
| DRMA 15       | DRAM 300   | ELEC 105      | ELEC 770   | ENGL 27       | LIT. 101   |
| DRMA 16       | DRAM 305   | ELEC 106      | ELEC 771   | ENGL 29       | LIT. 251   |
| DRMA 17       | DRAM 338   | ELEC 115      | ELEC 115   | ENGL 30       | LIT. 200   |
| DRMA 47       | DRAM 642   | ELEC 122      | ELEC 720   | ENGL 31A      | LIT. 201   |
| DRMA 48       | DRAM 680   | ELEC 132      | ELEC 730   | ENGL 31B      | LIT. 202   |
| DRMA 49       | DRAM 690   | ELEC 133      | ELEC 740   | ENGL 42A      | LIT. 301   |
| DRMA 230      | DRAM 230   | ELEC 134      | ELEC 750   | ENGL 42B      | LIT. 302   |
| ECED 3        | ECE. 212   | ELEC 135      | ELEC 751   | ENGL 43       | LIT. 266   |
| ECED 4        | ECE. 210   | ELEC 143      | ELEC 760   | ENGL 46A      | LIT. 231   |
| ECED 5        | ECE. 211   | ENGG 1A       | ENGR 111   | ENGL 46B      | LIT. 232   |
| ECED 7        | ECE. 230   | ENGG 1B       | ENGR 112   | ENGL 47       | ENGL 643   |
| ECED 47       | ECE. 647   | ENGG 4        | ENGR 666   | ENGL 47       | LIT. 643   |
| ECED 48       | ECE. 680   | ENGG 14       | ENGR 120   | ENGL 48       | LIT. 680   |
| ECED 49       | ECE. 690   | ENGG 16       | ENGR 150   | ENGL 48       | ENGL 680   |
| ECON 1A       | ECON 100   | ENGG 17       | ENGR 160   | ENGL 49       | ENGL 690   |
| ECON 1B       | ECON 102   | ENGG 19       | ENGR 290   | ENGL 49       | LIT. 690   |
| ECON 2        | ECON 123   | ENGG 20       | ENGR 200   | ENGL 57A      | ENGL 311   |
| ECON 10       | ECON 108   | ENGG 22       | ENGR 220   | ENGL 57B      | ENGL 312   |
| ECON 11       | ECON 230   | ENGG 35       | ENGR 230   | ENGL 61       | ENGL 801   |
| ECON 12       | ECON 130   | ENGG 36       | ENGR 240   | ENGL 61A      | ENGL 811   |
| ECON 15       | ECON 250   | ENGG 37       | ENGR 250   | ENGL 62       | ENGL 802   |
| ECON 20A      | ECON 661   | ENGG 38       | ENGR 260   | ENGL 63       | ENGL 860   |
| ECON 20B      | ECON 662   | ENGG 45       | ENGR 270   | ENGL 65       | ENGL 880   |

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|---------------|------------|---------------|------------|---------------|------------|
| ENGL 66       | READ 802   | FIRE 65       | FIRE 750   | GERM 8A       | GERM 201   |
| ENGL 67       | READ 803   | FIRE 66       | FIRE 755   | GERM 8B       | GERM 202   |
| ENGL 75       | LIT. 841   | FIRE 67       | FIRE 760   | GERM 25A      | GERM 161   |
| ENGL A11      | ENGL 411   | FIRE 68A      | FIRE 771   | GERM 25B      | GERM 162   |
| ENGL 148      | READ 801   | FIRE 68B      | FIRE 772   | GERM 30       | GERM 620   |
| ETHN 1A       | ETHN 101   | FIRE 70A      | FIRE 781   | GERM 48       | GERM 680   |
| ETHN 1B       | ETHN 102   | FIRE 70B      | FIRE 782   | GERM 49       | GERM 690   |
| ETHN 3        | ETHN 300   | FITN 309      | FITN 309   | GERM 100A     | GERM 801   |
| ETHN 4        | ETHN 425   | FREN 1        | FREN 110   | GERM 100B     | GERM 802   |
| ETHN 5        | ETHN 305   | FREN 1A       | FREN 111   | GERM 100C     | GERM 803   |
| ETHN 6A       | ETHN 151   | FREN 1B       | FREN 112   | GERM 100D     | GERM 804   |
| ETHN 6B       | ETHN 152   | FREN 2        | FREN 120   | GUID 5        | GUID 405   |
| ETHN 7        | ETHN 160   | FREN 2A       | FREN 121   | GUID 8        | GUID 808   |
| ETHN 8        | ETHN 310   | FREN 2B       | FREN 122   | GUID 10       | GUID 410   |
| ETHN 11       | ETHN 320   | FREN 3        | FREN 130   | GUID 11       | GUID 411   |
| ETHN 12A      | ETHN 350   | FREN 3A       | FREN 131   | GUID 30A      | GUID 430   |
| ETHN 12B      | ETHN 351   | FREN 3B       | FREN 132   | GUID 30B      | GUID 432   |
| ETHN 14       | ETHN 435   | FREN 4        | FREN 140   | GUID 31       | GUID 431   |
| ETHN 15       | ETHN 267   | FREN 8A       | FREN 201   | GUID 48       | GUID 680   |
| ETHN 16       | ETHN 150   | FREN 8B       | FREN 202   | GUID 49       | GUID 690   |
| ETHN 17       | ETHN 510   | FREN 25A      | FREN 161   | HIST 4A       | HIST 100   |
| ETHN 18       | ETHN 520   | FREN 25B      | FREN 162   | HIST 4B       | HIST 101   |
| ETHN 20       | ETHN 290   | FREN 30       | FREN 620   | HIST 4C       | HIST 102   |
| ETHN 25       | ETHN 450   | FREN 48       | FREN 680   | HIST 5        | HIST 110   |
| ETHN 33A      | ETHN 261   | FREN 49       | FREN 690   | HIST 6A       | HIST 401   |
| ETHN 33B      | ETHN 262   | FREN 100A     | FREN 801   | HIST 6B       | HIST 402   |
| ETHN 41       | ETHN 270   | FREN 100B     | FREN 802   | HIST 8A       | HIST 421   |
| ETHN 42       | ETHN 275   | FREN 100C     | FREN 803   | HIST 8B       | HIST 422   |
| ETHN 43       | ETHN 266   | FREN 100D     | FREN 804   | HIST 11       | HIST 230   |
| ETHN 44       | ETHN 288   | GEOG 1A       | GEOG 100   | HIST 12       | HIST 130   |
| ETHN 45       | ETHN 585   | GEOG 1B       | GEOG 110   | HIST 17A      | HIST 201   |
| ETHN 46       | ETHN 645   | GEOG 4        | GEOG 120   | HIST 17B      | HIST 202   |
| ETHN 48       | ETHN 680   | GEOG 5A       | GEOG 160   | HIST 20A      | HIST 141   |
| ETHN 49       | ETHN 690   | GEOG 5B       | GEOG 170   | HIST 20B      | HIST 142   |
| F.A. 15A      | ART 461    | GEOG 6        | GEOG 150   | HIST 21       | HIST 315   |
| F.A. 15B      | ART 462    | GEOG 48       | GEOG 680   | HIST 22       | HIST 310   |
| F.A. 16A      | ART 451    | GEOG 49       | GEOG 690   | HIST 24       | HIST 280   |
| F.A. 16B      | ART 452    | GEOG 99       | GEOG 800   | HIST 25       | HIST 350   |
| F.A. 17A      | ART 463    | GEOL 1A       | GEOL 210   | HIST 26       | HIST 210   |
| F.A. 17B      | ART 464    | GEOL 1B       | GEOL 220   | HIST 28       | HIST 260   |
| FIRE 47       | FIRE 647   | GEOL 6        | GEOL 130   | HIST 30       | HIST 290   |
| FIRE 48       | FIRE 680   | GEOL 10       | GEOL 100   | HIST 32       | HIST 360   |
| FIRE 49       | FIRE 690   | GEOL 48       | GEOL 680   | HIST 33       | HIST 242   |
| FIRE 50       | FIRE 700   | GEOL 49       | GEOL 690   | HIST 35       | HIST 270   |
| FIRE 51A      | FIRE 705   | GERM 1        | GERM 110   | HIST 44       | HIST 450   |
| FIRE 53       | FIRE 710   | GERM 1A       | GERM 111   | HIST 45       | HIST 160   |
| FIRE 54       | FIRE 712   | GERM 1B       | GERM 112   | HIST 46       | HIST 150   |
| FIRE 55       | FIRE 715   | GERM 2        | GERM 120   | HIST 48       | HIST 680   |
| FIRE 56       | FIRE 720   | GERM 2A       | GERM 121   | HIST 49       | HIST 690   |
| FIRE 61       | FIRE 725   | GERM 2B       | GERM 122   | HIST 50       | HIST 810   |
| FIRE 62A      | FIRE 731   | GERM 3        | GERM 130   | HIST 99       | HIST 800   |
| FIRE 62B      | FIRE 732   | GERM 3A       | GERM 131   | HORT 47       | HORT 647   |
| FIRE 63       | FIRE 740   | GERM 3B       | GERM 132   | HORT 48       | HORT 680   |
| FIRE 64       | FIRE 745   | GERM 4        | GERM 140   | HORT 49       | HORT 690   |

Courses of Instruction (continued) 109

| Former Number | New Number | Former Number | New Number | Former Number | New Number |
|---------------|------------|---------------|------------|---------------|------------|
| HORT 90A      | HORT 771   | HUM 12        | HUM. 112   | M.A. 57A      | MEDA 110   |
| HORT 90B      | HORT 772   | HUM 13        | HUM. 113   | M.A. 57B      | MEDA 111   |
| HORT 90C      | HORT 773   | HUM 14        | HUM. 114   | M.A. 59       | MEDA 100   |
| HORT 90D      | HORT 774   | HUM 25        | HUM. 125   | M.A. 60       | MEDA 120   |
| HORT 90E      | HORT 775   | HUM 36        | HUM. 136   | M.A. 70A      | MEDA 180   |
| HORT 90F      | HORT 776   | HUM 40        | HUM. 140   | M.A. 70B      | MEDA 130   |
| HORT 91A      | HORT 701   | HUM 48        | HUM. 680   | M.A. 94       | MEDA 140   |
| HORT 91B      | HORT 702   | HUM 49        | HUM. 690   | M.A. 95       | MEDA 160   |
| HORT 93       | HORT 705   | JAPA 1        | JAPA 100   | M.A. 100      | MEDA 150   |
| HORT 94       | HORT 706   | JAPA 1A       | JAPA 101   | M.A. 108      | MEDA 170   |
| HORT 95A      | HORT 711   | JAPA 1B       | JAPA 102   | MATH 1        | MATH 811   |
| HORT 95B      | HORT 712   | JAPA 2        | JAPA 110   | MATH 2        | MATH 812   |
| HORT 96A      | HORT 721   | JAPA 2A       | JAPA 111   | MATH 3        | MATH 813   |
| HORT 96B      | HORT 722   | JAPA 2B       | JAPA 112   | MATH 4        | MATH 414   |
| HORT 97A      | HORT 731   | JOUR 1        | JOUR 110   | MATH 5        | MATH 415   |
| HORT 97B      | HORT 732   | JOUR 2        | JOUR 120   | MATH 6        | MATH 416   |
| HORT 98A      | HORT 741   | JOUR 15       | JOUR 300   | MATH 7        | MATH 417   |
| HORT 98B      | HORT 742   | JOUR 16       | JOUR 310   | MATH 10       | MATH 100   |
| HORT 110A     | HORT 311   | JOUR 48       | JOUR 680   | MATH 11       | MATH 110   |
| HORT 110B     | HORT 312   | JOUR 49       | JOUR 690   | MATH 11A      | MATH 111   |
| HORT 111      | HORT 315   | LABR 10       | LBST 290   | MATH 11B      | MATH 112   |
| HORT 112      | HORT 327   | LABR 11       | LBST 110   | MATH 12       | MATH 115   |
| HORT 113      | HORT 342   | LABR 12A      | LBST 120   | MATH 13       | MATH 125   |
| HORT 114      | HORT 330   | LABR 12B      | LBST 125   | MATH 16       | MATH 105   |
| HORT 115      | HORT 340   | LABR 14       | LBST 140   | MATH 17       | MATH 210   |
| HORT 116      | HORT 411   | LABR 15       | LBST 150   | MATH 19       | MATH 120   |
| HORT 117      | HORT 412   | LABR 20       | LBST 200   | MATH 19A      | MATH 119   |
| HORT 118      | HORT 320   | LABR 48       | LBST 680   | MATH 19B      | MATH 121   |
| HORT 119      | HORT 415   | LABR 49       | LBST 690   | MATH 21       | MATH 130   |
| HORT 120      | HORT 341   | LCTR 96       | TUTR 896   | MATH 22       | MATH 200   |
| HORT 130A     | HORT 801   | LCTR 97       | TUTR 897   | MATH 23A      | MATH 241   |
| HORT 130B     | HORT 802   | LCTR 98       | TUTR 898   | MATH 23B      | MATH 242   |
| HORT 132A     | HORT 811   | LCTR 99       | TUTR 899   | MATH 24A      | MATH 151   |
| HORT 132B     | HORT 812   | LTEC 1        | LCSI 100   | MATH 24B      | MATH 152   |
| HORT 135A     | HORT 821   | MACH 48       | MTT. 680   | MATH 25       | MATH 162   |
| HORT 135B     | HORT 822   | MACH 49       | MTT. 690   | MATH 27       | MATH 219   |
| HSCI 1        | HSCI 100   | MACH 51A      | MTT. 100   | MATH 28       | MATH 220   |
| HSCI 2A       | HSCI 102   | MACH 52       | MTT. 110   | MATH 30       | MATH 260   |
| HSCI 2B       | HSCI 104   | MACH 53       | MTT. 120   | MATH 31       | MATH 261   |
| HSCI 2C       | HSCI 105   | MACH 63       | MTT. 710   | MATH 32       | MATH 262   |
| HSCI 2D       | HSCI 109   | MACH 63       | MTT. 720   | MATH 33       | MATH 263   |
| HSCI 2E       | HSCI 103   | MACH 64       | MTT. 700   | MATH 34       | MATH 275   |
| HSCI 2F       | HSCI 101   | MACH L52      | MTT. 111   | MATH 35       | MATH 270   |
| HSCI 2G       | HSCI 106   | MACH L53      | MTT. 121   | MATH 48       | MATH 680   |
| HSCI 2H       | HSCI 111   | MACH 102A     | MTT. 750   | MATH 49       | MATH 690   |
| HSCI 2I       | HSCI 112   | MACH 102B     | MTT. 755   | METE 1        | METE 100   |
| HSCI 9        | HSCI 310   | MACH 102C     | MTT. 760   | METE 10       | METE 110   |
| HSCI 11       | HSCI 160   | MACH 140      | MTT. 770   | METE 48       | METE 680   |
| HSCI 47       | HSCI 644   | MACH 210      | MTT. 210   | METE 49       | METE 690   |
| HSCI 48       | HSCI 680   | MACH 211      | MTT. 211   | MGMT 48       | MGMT 680   |
| HSCI 49       | HSCI 690   | MACH 220      | MTT. 220   | MGMT 49       | MGMT 690   |
| HUM 1         | HUM. 101   | MACH 221      | MTT. 221   | MGMT 50       | MGMT 105   |
| HUM 2         | HUM. 102   | MACH 230      | MTT. 230   | MGMT 52       | MGMT 110   |
| HUM 11        | HUM. 111   | MACH 712      | MTT. 712   | MGMT 54       | MGMT 120   |



## 110 Courses of Instruction (continued)

| Former Number | New Number | Former Number | New Number | Former Number | New Number |
|---------------|------------|---------------|------------|---------------|------------|
| MGMT 55       | MGMT 125   | MUS 18B       | MUS. 372   | PHIL 35       | PHIL 320   |
| MGMT 61       | MGMT 130   | MUS 21        | MUS. 440   | PHIL 37       | PHIL 395   |
| MGMT 63       | MGMT 135   | MUS 22        | MUS. 445   | PHIL 48       | PHIL 680   |
| MGMT 65       | MGMT 140   | MUS 23        | MUS. 430   | PHIL 49       | PHIL 690   |
| MGMT 71       | MGMT 200   | MUS 24        | MUS. 320   | PHYS 2A       | PHYS 210   |
| MGMT 72       | MGMT 205   | MUS 25        | MUS. 340   | PHYS 2B       | PHYS 220   |
| MGMT 77       | MGMT 210   | MUS 26        | MUS. 360   | PHYS 4A       | PHYS 250   |
| MGMT 80       | MGMT 215   | MUS 27        | MUS. 460   | PHYS 4B       | PHYS 260   |
| MGMT 85       | MGMT 220   | MUS 28        | MUS. 450   | PHYS 4C       | PHYS 270   |
| MGMT 90       | MGMT 225   | MUS 29        | MUS. 451   | PHYS 10       | PHYS 100   |
| MGMT 91       | MGMT 230   | MUS 33        | MUS. 470   | PHYS 48       | PHYS 680   |
| MGMT 92       | MGMT 235   | MUS 34        | MUS. 480   | PHYS 49       | PHYS 690   |
| MGMT 93       | MGMT 240   | MUS 35        | MUS. 490   | PLSC 1        | PLSC 100   |
| MGMT 96       | MGMT 245   | MUS 37        | MUS. 402   | PLSC 2        | PLSC 110   |
| MGMT 99       | MGMT 100   | MUS 38        | MUS. 403   | PLSC 3        | PLSC 130   |
| M PE 1        | AQUA 201   | MUS 39        | MUS. 405   | PLSC 5        | PLSC 150   |
| M PE 1        | AQUA 210   | MUS 40        | MUS. 495   | PLSC 7        | PLSC 250   |
| M PE 1        | AQUA 204   | MUS 41        | MUS. 496   | PLSC 9        | PLSC 260   |
| M PE 1        | TEAM 165   | MUS 47        | MUS. 642   | PLSC 12       | PLSC 300   |
| M PE 1        | FITN 213   | MUS 48        | MUS. 680   | PLSC 18       | PLSC 520   |
| M PE 1        | COMB 308   | MUS 49        | MUS. 690   | PLSC 21       | PLSC 210   |
| M PE 1        | COMB 302   | NRSG 1        | NURS 210   | PLSC 22       | PLSC 220   |
| M PE 1        | TEAM 135   | NRSG 2        | NURS 221   | PLSC 23       | PLSC 310   |
| M PE 1        | COMB 305   | NRSG 2        | NURS 222   | PLSC 25       | PLSC 200   |
| M PE 1        | FITN 215   | NRSG 3        | NURS 231   | PLSC 27       | PLSC 205   |
| M PE 1        | TEAM 105   | NRSG 4        | NURS 241   | PLSC 28       | PLSC 255   |
| M PE 1        | TEAM 101   | NRSG 5        | NURS 242   | PLSC 30       | PLSC 215   |
| M PE 1        | FITN 214   | NRSG 41       | NURS 810   | PLSC 39       | PLSC 550   |
| M PE 4        | VARS 120   | NRSG 42       | NURS 821   | PLSC 40       | PLSC 590   |
| M PE 5        | VARS 110   | NRSG 42       | NURS 822   | PLSC 48       | PLSC 680   |
| M PE 6        | VARS 200   | NRSG 43       | NURS 831   | PLSC 49       | PLSC 690   |
| M PE 8        | VARS 100   | NRSG 44       | NURS 841   | PSCI 10       | PSCI 100   |
| M PE 9        | VARS 170   | NRSG 45       | NURS 842   | PSYC 1A       | PSYC 100   |
| M PE 12       | VARS 130   | NRSG 46       | NURS 850   | PSYC 1B       | PSYC 105   |
| M PE 13       | VARS 190   | NRSG 47       | NURS 647   | PSYC 4        | PSYC 110   |
| MUS 1A        | MUS. 101   | NRSG 48       | NURS 680   | PSYC 5        | PSYC 201   |
| MUS 1B        | MUS. 102   | NRSG 49       | NURS 690   | PSYC 6        | PSYC 300   |
| MUS 2A        | MUS. 103   | NURV 51       | NURS 110   | PSYC 7        | PSYC 121   |
| MUS 2B        | MUS. 104   | NURV 52A      | NURS 120   | PSYC 10       | PSYC 108   |
| MUS 4A        | MUS. 131   | NURV 52B      | NURS 130   | PSYC 13       | PSYC 480   |
| MUS 4B        | MUS. 132   | NURV 60       | NURS 100   | PSYC 14       | PSYC 355   |
| MUS 5A        | MUS. 133   | OCEN 10       | OCEN 100   | PSYC 28       | PSYC 250   |
| MUS 5B        | MUS. 134   | PALE 1        | PALN 110   | PSYC 33       | PSYC 400   |
| MUS 6         | MUS. 202   | PHIL 1        | PHIL 100   | PSYC 34       | PSYC 410   |
| MUS 7         | MUS. 270   | PHIL 6A       | PHIL 101   | PSYC 39       | PSYC 340   |
| MUS 8         | MUS. 275   | PHIL 6B       | PHIL 105   | PSYC 40       | PSYC 358   |
| MUS 9         | MUS. 100   | PHIL 7        | PHIL 200   | PSYC 48       | PSYC 680   |
| MUS 12        | MUS. 301   | PHIL 12       | PHIL 210   | PSYC 49       | PSYC 690   |
| MUS 13        | MUS. 302   | PHIL 20A      | PHIL 160   | RCED 40       | REC. 100   |
| MUS 14        | MUS. 303   | PHIL 20B      | PHIL 170   | RCED 41       | REC. 110   |
| MUS 15        | MUS. 304   | PHIL 20C      | PHIL 190   | RCED 42       | REC. 165   |
| MUS 16        | MUS. 170   | PHIL 23       | PHIL 240   | RCED 43       | REC. 140   |
| MUS 17        | MUS. 150   | PHIL 24A      | PHIL 300   | RCED 44       | REC. 175   |
| MUS 18A       | MUS. 371   | PHIL 24B      | PHIL 340   | SOCI 1        | SOCI 100   |

| Former Number | New Number | Former Number      | New Number          | Former Number | New Number |
|---------------|------------|--------------------|---------------------|---------------|------------|
| SOCI 2        | SOCI 105   | SSCI 49            | SOSC 690            | TRAD 781      | TRAD 781   |
| SOCI 3        | SOCI 141   | TA/G 14            | TA&G 100            | TRAD 48       | TRAD 680   |
| SOCI 4        | SOCI 110   | TA/G 47            | TA&G 649            | TRAD 62       | TRAD 740   |
| SOCI 6        | SOCI 300   | TA/G 48            | TA&G 680            | TRAD 71A      | TRAD 701   |
| SOCI 12       | SOCI 200   | TA/G 49            | TA&G 690            | TRAD 71B      | TRAD 703   |
| SOCI 16       | SOCI 150   | TA/G 52A           | TA&G 201            | TRAD 72A      | TRAD 705   |
| SOCI 40A      | SOCI 151   | TA/G 52B           | TA&G 202            | TRAD 72B      | TRAD 707   |
| SOCI 40B      | SOCI 152   | TA/G 54            | TA&G 210            | TRAD 73A      | TRAD 711   |
| SOCI 48       | SOCI 680   | TA/G 55            | TA&G 220            | TRAD 73B      | TRAD 713   |
| SOCI 49       | SOCI 690   | TA/G 63            | TA&G 300            | TRAD 74A      | TRAD 715   |
| SPAN 1        | SPAN 110   | TA/G 64            | TA&G 310            | TRAD 74B      | TRAD 717   |
| SPAN 1A       | SPAN 111   | TA/G 65A           | TA&G 351            | TRAD L71A     | TRAD 702   |
| SPAN 1B       | SPAN 112   | TA/G 65B           | TA&G 352            | TRAD L71B     | TRAD 704   |
| SPAN 2        | SPAN 120   | TA/G 66            | TA&G 400            | TRAD L72A     | TRAD 706   |
| SPAN 2A       | SPAN 121   | TA/G 710           | TA&G 710            | TRAD L72B     | TRAD 708   |
| SPAN 2B       | SPAN 122   | TA/G 711           | TA&G 711            | TRAD L73A     | TRAD 712   |
| SPAN 3        | SPAN 130   | TA/G 712           | TA&G 712            | TRAD L73B     | TRAD 714   |
| SPAN 3A       | SPAN 131   | TA/G 713           | TA&G 713            | TRAD L74A     | TRAD 716   |
| SPAN 3B       | SPAN 132   | TA/G 714           | TA&G 714            | TRAD L74B     | TRAD 718   |
| SPAN 4        | SPAN 140   | TA/G 715           | TA&G 715            | TRAD 721      | TRAD 721   |
| SPAN 8A       | SPAN 201   | TECH 47            | TECH 649            | TRAD 722      | TRAD 722   |
| SPAN 8B       | SPAN 202   | TECH 48            | TECH 680            | TRAD 723      | TRAD 723   |
| SPAN 25A      | SPAN 161   | TECH 49            | TECH 690            | TRAD 724      | TRAD 724   |
| SPAN 25B      | SPAN 162   | TECH 71            | TECH 100            | TRAD 725      | TRAD 725   |
| SPAN 29       | SPAN 251   | TECH 72            | TECH 110            | TRAD 726      | TRAD 726   |
| SPAN 30       | SPAN 620   | TECH 73            | TECH 700            | TRAD 727      | TRAD 727   |
| SPAN 48       | SPAN 680   | TECH 74            | TECH 120            | TRAD 728      | TRAD 728   |
| SPAN 49       | SPAN 690   | TECH 76            | TECH 200            | TRAD 751      | TRAD 751   |
| SPAN 100A     | SPAN 801   | TELE 47            | TELE 642            | TRAD 752      | TRAD 752   |
| SPAN 100B     | SPAN 802   | TELE 48            | TELE 680            | TRAD 753      | TRAD 753   |
| SPAN 100C     | SPAN 803   | TELE 49            | TELE 690            | TRAD 754      | TRAD 754   |
| SPAN 100D     | SPAN 804   | TELE 51            | TELE 110            | TRAD 761      | TRAD 761   |
| SPCH 1A       | SPCH 100   | TELE 52A           | TELE 131            | TRAD 762      | TRAD 762   |
| SPCH 2A       | SPCH 111   | TELE 52B           | TELE 132            | TRAD 763      | TRAD 763   |
| SPCH 2B       | SPCH 112   | TELE 53            | TELE 135            | TRAD 764      | TRAD 764   |
| SPCH 10       | SPCH 120   | TELE 60A           | TELE 231            | TRAD 765      | TRAD 765   |
| SPCH 33       | SPCH 130   | TELE 60B           | TELE 232            | TRAD 766      | TRAD 766   |
| SPCH 48       | SPCH 852   | TELE 61A           | TELE 241            | TRAD 767      | TRAD 767   |
| SPCH 48       | SPCH 680   | TELE 61B           | TELE 242            | TRAD 768      | TRAD 768   |
| SPCH 48       | SPCH 851   | TELE 61C           | TELE 243            | TRAD 769      | TRAD 769   |
| SPCH 49       | SPCH 690   | TELE 65            | TELE 190            | TRAD 770      | TRAD 770   |
| SPCH 57A      | SPCH 811   | TELE 66            | TELE 115            | TRAD 771      | TRAD 771   |
| SPCH 57B      | SPCH 812   | TELE 67            | TELE 195            | TRAD 772      | TRAD 772   |
| SPCH 62       | SPCH 825   | TELE 68            | TELE 192            | TRAD 782      | TRAD 782   |
| SSCI 10A      | SOSC 130   | <del>TELE 70</del> | <del>TELE 463</del> | TRAD 783      | TRAD 783   |
| SSCI 10B      | SOSC 131   | TELE 71            | TELE 194            | TRAD 784      | TRAD 784   |
| SSCI 10C      | SOSC 132   | TELE 101A          | TELE 301            | TRAD 785      | TRAD 785   |
| SSCI 10D      | SOSC 133   | TELE 101B          | TELE 302            | TRAD 786      | TRAD 786   |
| SSCI 10E      | SOSC 134   | TRAD 767           | TRAD 767            | TRAD 787      | TRAD 787   |
| SSCI 20       | SOSC 185   | TRAD 768           | TRAD 768            | TRAD 788      | TRAD 788   |
| SSCI 33A      | SOSC 261   | TRAD 769           | TRAD 769            | WELD 47       | WELD 649   |
| SSCI 33B      | SOSC 262   | TRAD 770           | TRAD 770            | WELD 48       | WELD 680   |
| SSCI 47       | SOSC 648   | TRAD 771           | TRAD 771            | WELD 49       | WELD 690   |
| SSCI 48       | SOSC 680   | TRAD 772           | TRAD 772            | WELD 51       | WELD 100   |

112 Courses of Instruction (continued)

| Former Number | New Number | Former Number | New Number | Former Number | New Number |
|---------------|------------|---------------|------------|---------------|------------|
| WELD 52A      | WELD 110   | WELD L62B     | WELD 221   | W PE 3        | FITN 216   |
| WELD 52B      | WELD 120   | WELD 103      | WELD 700   | W PE 4        | VARs 310   |
| WELD 62A      | WELD 210   | W PE 3        | TEAM 118   | W PE 7        | VARs 380   |
| WELD 62B      | WELD 220   | W PE 3        | TEAM 158   | W PE 21       | VARs 340   |
| WELD 75       | WELD 300   | W PE 3        | TEAM 178   | W PE 22       | VARs 300   |
| WELD L52A     | WELD 111   | W PE 3        | COMB 110   | W PE 23       | VARs 320   |
| WELD L52B     | WELD 121   | W PE 3        | FITN 150   | W PE 24       | VARs 330   |
| WELD L62A     | WELD 211   |               |            |               |            |



## Description of Courses

### Accounting

**100 (Bus. 66) ACCOUNTING PROCEDURES (4).** Five lecture hours plus one lab hour per week. Prerequisite: Completion of or concurrent enrollment in Bus. 810 or 115, or equivalent. Application of accounting procedures for a small business using general and special journals, general ledger, subsidiary ledgers, petty cash records and payroll records for cash or accrual basis. Preparation of trial balances, work sheets, adjusting and closing entries and financial statements.

**105 (Bus. 67) SECRETARIAL ACCOUNTING (2-3).** Three lecture hours and one lab hour a week by arrangement for 11 weeks—2 units; three lecture hours and one lab hour a week by arrangement for 16 weeks—3 units. Prerequisite: Bus. 810 or 115, or equivalent. (Fall only.) Fundamentals of accounting, including instruction and practice in organizing, recording, and interpreting basic record-keeping essentials. For the student who needs a general knowledge of accounting. Students planning to transfer to a university should complete Math 120 or have two years of high school Algebra.

**111 (BUAD 1A) ACCOUNTING PRINCIPLES I (4).** Five lecture hours per week. Prerequisite: Sophomore standing recommended. Records, accounts and statements of proprietorship and partnership enterprises. Debit and credit theory and generally accepted accounting principles and concepts.

**112 (BUAD 18) ACCOUNTING PRINCIPLES II (4).** Five lecture hours per week. Prerequisite: Actg. 111, or equivalent with grade of C or better. Applications of theory, concepts and principles to corporations. Introduction to departmental, cost and manufacturing accounting, budgeting, analysis and management decisions.

**113 ACCOUNTING PRINCIPLES III (4).** Five lecture hours per week. Prerequisite: Actg. 112 or equivalent with grade C or better. Current issues in accounting theory and practice. Accounting for and constructing books, statements and records from incomplete data. Practical application of auditing. Business taxes, all forms from calculation to reporting.

**171 (Bus. 69A) FEDERAL INCOME TAX I (3).** Three lecture hours per week. Prerequisite: Actg. 111. Study of the procedures for computing the income tax liability of individuals in accordance with the latest income tax laws and regulations. Practice in solving typical problems and in preparation of tax returns.

**172 (BUS. 69B) FEDERAL INCOME TAX II (3).** Three lecture hours per week. Prerequisite: Actg. 111 or equivalent. Study of the procedures for computing the income tax liability of partnerships, corporations, estates and trusts in accordance with the latest income tax laws and regulations. Practice and solving of typical problems in the preparation of tax returns.

**195 (BUAD 20) COMPUTER APPLICATIONS (4).** Three lecture hours and two lab hours per week. Prerequisites: Concurrent enrollment in or completion of Actg. 111; completion of one year of high school algebra, or Math. 110. Study of business usage of computers; concepts and components of computers; impact of computers upon business organization. Use of source language(s) in writing, running and debugging programs; problems of accounting and management science.

**680 (BUAD 48) SELECTED TOPICS IN BUSINESS ADMINISTRATION (1-3).** Hours by arrangement. Selected topics in Business Administration not covered by regular catalog offerings. Course content and unit credit to be determined by the Business Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (BUAD 49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Administration of Justice

### (Police Science)

**100 (1) INTRODUCTION TO ADMINISTRATION OF JUSTICE (3).** *Three lecture hours per week. Required of all Administration of Justice majors in the freshman year.* History and philosophy of administration of justice in America; recapitulation of the system; identifying the various subsystems, role expectations, and their interrelationships; theories of crime, education and training for professionalism in the system. (This course is part of the core curriculum.)

**102 (2) PRINCIPLES AND PROCEDURES OF THE JUSTICE SYSTEM (3).** *Three lecture hours per week.* An in-depth study of the role and responsibilities of each segment within the administration of justice system: law enforcement, judicial, corrections. A past, present and future exposure to each subsystem, procedures from initial entry to final disposition and the relationship each segment maintains with its system members. (This course is part of the core curriculum.)

**104 (3) CONCEPTS IN CRIMINAL LAW (3).** *Three lecture hours per week.* Historical development, philosophy of law and constitutional provisions; definitions, classification 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. (This course is part of core curriculum.)

**106 (4) LEGAL ASPECTS OF EVIDENCE (3).** *Three lecture hours per week.* 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. (This course is part of core curriculum.)

**108 (5) COMMUNITY RELATIONS (3).** *Three lecture hours per week.* An in-depth exploration of roles of administration of justice practitioners and their agencies. Interrelationships and role expectations between agencies and the public. Emphasis is on professional image of system of justice administration and development of positive relationships between system and public. (This course is part of core curriculum.)

**120 (7) CRIMINAL INVESTIGATION (3).** *Three lecture hours per week.* Study of basic principles of all types of investigations utilized in the justice system. Coverage will include human aspects in dealing with the public; specific knowledge necessary for handling

crime scenes; interviews, evidence, surveillance, follow-up, technical resources and case preparation.

**125 (10) JUVENILE PROCEDURES (3).** *Three lecture hours per week.* Study of extent, causation and prevention of juvenile delinquency; an analysis of juvenile courts, probation, institutional treatment, parole and prevention programs. The sociological and anthropological approaches to juvenile delinquency in terms of their relationship to the administration of justice systems.

**140 (15a) FINGERPRINT CLASSIFICATION (1).** *One lecture hour per week. Prerequisite: Admj 120.* Study of the biological structure of the layers of the skin; the history of fingerprinting. Development of knowledge and identification capabilities for fingerprint patterns. Henry and FBI systems of classifications with ability to file and search, and demonstration of practical application.

**141 (15b) FINGERPRINTING, LATENT (1).** *One lecture hour per week. Prerequisite: Admj 120.* Discussion of modus operandi leading to the location of areas containing latent impressions. Development of latent impressions by mechanical and chemical mediums, photography and lifting techniques. Comparison of latents with rolled impression. Courtroom comparison with practical application.

**142 (15c) CRIMINAL IDENTIFICATION (1).** *One lecture hour per week. Prerequisite: Admj 120.* Study of basic methods of identification (Portrait Parle), Bertillon system and current identification systems and equipment available for development of composite images. Identification and field photography, camera and darkroom procedures and techniques.

**150 (12) TRAFFIC SUPERVISION AND CONTROL (3).** *Three lecture hours per week. Prerequisite: Administration of Justice 100.* Laws relating to the operation of motor vehicles: California Vehicle Code sections most often encountered and violated; regulation and traffic accident investigation; emphasis on causes and contributory aspects of driver behavior.

**153 (19) PATROL PROCEDURES (3).** *Three lecture hours per week. Prerequisite: Completion of or concurrent enrollment in Administration of Justice 100.* Methods, techniques and responsibilities of the patrol unit. The value of one-man car as opposed to two-man car; marked vs. unmarked patrol cars. Beat patrol and observation, police hazards and how to handle them.



**165 (17) POLICE ORGANIZATION AND ADMINISTRATION (3).** *Three lecture hours per week. Prerequisites: Administration of Justice 100 and 102 and sophomore standing.* Functions of the police organization. Concepts of chain of command, span of control, functional supervision, unity of command and the purpose of the police organization and administration.

**170 (25) POLICE DEFENSE TACTICS (1).** *Two lecture hours per week.* Modern police techniques in self-defense. Use of techniques which subdue with least amount of violence; controls with least possibility of injury to both parties. Teaches the art of judo and jujitsu and baton training.

**647 (47) COOPERATIVE EDUCATION (1-4).** **(Credit/No credit.)** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133).

**680 (48) SELECTED TOPICS IN ADMINISTRATION OF JUSTICE (1-3).** *Hours by arrangement.* Selected topics in Administration of Justice not covered by regular catalog offerings. Course content and unit credit to be determined by the Health and Service Careers Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**755 (94) ADVANCED OFFICERS COURSE (1-2).** *Twenty to forty lecture hours per semester by arrangement. Prerequisites: Completion of ADMJ 100, 102, 104, 106, 108.* New laws, recent court decisions, current enforcement procedures, new concepts in law enforcement technology, community human relations and other refresher training as may be necessary. Certified by the Commission on Peace Officer Standards and Training (POST). (May be repeated for credit.)

**760 (96a) PEACE OFFICERS ORIENTATION (1-2).** *One week, by arrangement: 26 or 40 hours.* Laws of arrest, search and seizure, methods of arrest and discretionary decision-making. The care and use of firearms, moral and legal applications of firearms, and range qualification to demonstrate performance objectives.

This course certified by Peace Officer Standards & Training (POST) as required by Penal Code Section 832 for Peace Officers. (Note: Any person convicted of a felony may be in violation of the law by participating in the firearms portion of this course.)

**761 (96b) STATE SECURITY REQUIREMENTS: FIREARMS TRAINING (½).** *Eight lecture and six lab hours per semester.* Designed to train contract, private patrol and proprietary guards in handgun usage. Course requires lecture and range qualification. (Meets State of California requirements. College will certify student to Bureau of Collection and Investigation Services upon successful completion of exam and range firing.) (Note: Any person convicted of a felony may be in violation of the law by participating in this firearms course.)

**762 (96c) SECURITY BATON TRAINING (½-1).** *Eight or 16 hours (one week by arrangement).* A course in the legal and moral aspects as related to use of force. Familiarization with various baton procedures, defensive and offensive control and arrest techniques. Ability to demonstrate performance objectives. This course certified by Peace Officers Standards and Training (POST) and fulfills requirements of Consumer Affairs Division.

**766 (98) CHEMICAL FIREARM INSTRUCTION (½-1).** *Offered for either 4 hours lecture and 4 hours lab per semester; or 8 hours lecture and 32 hours lab per semester, by arrangement.* History and use in law enforcement of nonlethal chemical agents. Field application and exposure to various agents and first aid for exposure victims. Safety instruction for firing range operation; care, safety and use of various police weapons including range familiarization. (Conforms to Peace Officers Standards and Training (POST) for Chemical agents training.) (Note: Any person convicted of a felony may be in violation of the law by participating in the firearms portion of this course.)

**771 (99a) RESERVE OFFICERS BASIC TRAINING I (3).** *Twenty-six hours lecture, fourteen hours lab per semester. Prerequisite: Administration of Justice 100 or 102, or eligibility for Reserve Police Organization.* Arrest, search and seizure, law theory and practical application; firearms, legal aspects, safety standards and procedures. Range-firing of weapon and qualification by student. Student must be able to demonstrate performance objectives upon completion of course. Course is certified by Commission on Peace Officer Standards and Training (POST) as required under Penal Code Section 832.6 (Note: Any person convicted of a felony may be in violation of the law by participating in the firearms portion of this course.)

**772 (99b) RESERVE OFFICERS BASIC TRAINING II (3).** *Forty-eight hours lecture, eight hours lab, per semester. Prerequisite: Administration of Justice 771, or equivalent.* Role of the back-up officer, including patrol procedures, defensive tactics, vehicle stops; range, with shotgun. Booking procedures and communications. The student, upon completion of the course, must be able to satisfactorily complete the required performance objectives. Course certified by Peace Officers Standards and Training (POST). (Note: Any person convicted of a felony may be in violation of the law by participating in the firearms portion of this course.)

**773 (99c) RESERVE OFFICERS BASIC TRAINING III (4).** *Three lecture hours per week and eight hours on designated Saturdays. (Total 124 hours.) Prerequisites: Administration of Justice 771 and 772, or equivalent.* Professional orientation, community relations. Law as related to specific offenses. Traffic control and violations; criminal investigation; report writing; vehicle operation; laws of evidence; patrol procedures and physical fitness and defensive techniques. Upon completion of this module, the student must be able to satisfactorily complete the required performance objectives. Course certified by Peace Officers Standards and Training (POST). In addition to completing Administration of Justice 771, 772 and 773, students must complete first aid, CPR and Administration of Justice 766 (with grade C or better) in order to qualify for Verification of Completion in Reserve Officer Training Program.

## Aeronautics

(Also see Meteorology 100 and 110)

*Students in Airframe and Powerplant courses will be expected to pay a fee (approximately \$30) for airplane taxiing at the airport site.*

**100 (2a) PRIVATE PILOT GROUND SCHOOL (3).** *Three lecture hours per week. Concurrent enrollment in Aero. 126 required (Aero. 126 not required for evening session).* Preflight requirements, basic navigation, flight computer, use of basic flight manuals, aviation aeronautical chart reading, aviation weather, federal aviation regulations and enroute emergency procedures.

**101 (2b) INSTRUMENT FLIGHT GROUND SCHOOL (3).** *Three lecture hours per week. Prerequisites: Aero. 100 and concurrent enrollment in Aero. 103, 115, 137, Meteorology 110 or 100. (Private Pilot license or Aero.*

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*100 required for Evening Session.)* Federal Aviation regulations, navigation and meteorology, requirements for instrument flight. Preparation of flight logs and related flight planning.

**102 (2c) COMMERCIAL PILOT GROUND SCHOOL (3).** *Three lecture hours per week. Prerequisites: Aero. 100, 101 and 137. (Private Pilot license or Aero. 100 required for Evening Session.)* Aircraft weight and balance, performance charts, high performance aircraft systems and operation. F.A.A. Regulations parts 1, 61, 91 and 135, NTSB 830. Prepares students to take F.A.A. Commercial Pilot Airplane written examination.

**103 (3) FLIGHT SIMULATION (½) (Credit/No credit for Evening classes.)** *Prerequisites: Completion of Aero. 100 or Private Pilot Certificate and concurrent enrollment in 101 or 102. A fee may be charged.* Practice in Singer GAT-1 ground trainer in basics of flight through advanced instrument maneuvers. Level of study depends on flight experience. Trainers are equipped with 3 axis motion and radio navigation aids including VOR, ADF, ILS. Automatic tracker records flight progress. (May be taken five times for credit, but only once during any semester.)

**115 (5) AIRCRAFT POWERPLANT (3).** *Three lecture hours per week.* Theory, operation and nomenclature of reciprocating and turbine powerplants. Basic construction of induction, ignition, lubrication, propellers, systems and use of performance curves.

**126 (6) AIRCRAFT (3).** *Three lecture hours per week.* Study of subsonic, transonic and supersonic flight with emphasis on stability and control. Aircraft nomenclature, design features, systems components and construction, including fixed and rotary wing aircraft. Weight and balance, load factors calculations on aircraft and introduction to the federal aviation regulations systems.

**137 (7) FEDERAL AVIATION REGULATIONS (3).** *Three lecture hours per week. Prerequisite: Aero. 101 or concurrent enrollment.* The study and practical application of Federal Aviation Regulations and the Airman's Information Manual as it pertains to general operating and flight rules, definitions, and abbreviations, pilot certification and National Transportation Safety Board accident reporting.

**300 (51) GENERAL MAINTENANCE I (2½).** *Five lecture hours per week for 8 weeks. Prerequisite: Concurrent enrollment in Aero. 301.* Blueprint reading, mechanical drawing, aircraft weight and balance procedures, and other maintenance functions as specified in Federal Aviation Regulation Part 147.

**301 (51L) GENERAL MAINTENANCE LAB I (4).** Twenty-five lab hours per week for 8 weeks. Prerequisite: Concurrent enrollment in Aero. 300. Aircraft weighing, non-destructive testing, basic heat treating, use of technical manuals and other maintenance functions as specified in Federal Aviation Regulation Part 147.

**310 (52) ADVANCED GENERAL MAINTENANCE II (2½).** Five lecture hours per week for 8 weeks. Prerequisites: Aero. 300, 301 and concurrent enrollment in Aero. 311. Fundamentals of direct and alternating current electricity, fundamentals of applied mathematics, fundamentals of applied physics as specified by Federal Aviation Regulation Part 147.

**311 (52L) ADVANCED GENERAL MAINTENANCE LAB II (4).** Twenty-five lab hours per week for 8 weeks. Prerequisites: Aero. 300, 301, and concurrent enrollment in Aero. 310. Calculate and measure electrical power volts, amps, and resistance, start, ground operate, and move aircraft, overhaul piston and turbine engine ignition systems in accordance with Federal Aviation Part 147.

**320 (53) POWERPLANT MAINTENANCE I (2½).** Five lecture hours per week for 8 weeks. Prerequisites: Aero 300, 301, 310, 311, and concurrent enrollment in 321. Fundamentals of piston engine construction and operation, basic powerplant indicating systems, as specified in Federal Aviation Regulation Part 147.

**321 (53L) BASIC POWERPLANT MAINTENANCE LAB I (4).** Twenty-five lab hours per week for 8 weeks. Prerequisites: Aero. 300, 301, 310, 311, and concurrent enrollment in Aero. 320. Inspect and repair opposed and radial piston engines, perform powerplant inspections, inspect engine indicating systems as specified by Federal Aviation Regulation Part 147.

**330 (54) AIRFRAME MAINTENANCE I (2½).** Five lecture hours per week for 8 weeks. Prerequisites: Aero. 300, 301, 310, 311, and concurrent enrollment in Aero. 331. Principles of aircraft sheet metal structures, identification of aircraft fasteners, aircraft sheetmetal layout and fabrication as specified in Federal Aviation Regulation Part 147.

**331 (54L) AIRFRAME MAINTENANCE LAB II (4).** Twenty-five lab hours per week for 8 weeks. Prerequisites: Aero. 300, 301, 310, 311, and concurrent enrollment in Aero. 330. Install special rivets and fasteners, inspect and repair sheet metal structures, fabricate tubular structures and other aircraft structural maintenance functions as specified by Federal Aviation Regulation Part 147.

**340 (55) POWERPLANT MAINTENANCE II (2½).** Five lecture hours per week for 8 weeks. Prerequisites: Aero. 300, 301, 310, 311, 320, 321, and concurrent enrollment in Aero. 341. Fundamentals of turbine engine construction and operation, piston and turbine engine fuel metering systems as specified in Federal Aviation Regulation Part 147.

**341 (55L) POWERPLANT MAINTENANCE LAB II (4).** Twenty-five lab hours per week for 8 weeks. Prerequisites: Aero. 300, 301, 310, 311, 320, 321 and concurrent enrollment in Aero. 340. Inspect and service turbine engines, repair engine fuel metering components as specified in Federal Aviation Regulation Part 147.

**350 (56) AIRFRAME MAINTENANCE II (2½).** Five lecture hours per week for 8 weeks. Prerequisites: Aero. 300, 301, 310, 311, 330, 331, and concurrent enrollment in Aero. 351. Principles of construction of aircraft wooden structures, repair of aircraft synthetic material, principles of rigging fixed and rotary wing aircraft as specified in Federal Aviation Regulation Part 147.

**351 (56L) AIRFRAME MAINTENANCE LAB II (4).** Twenty-five lab hours per week for 8 weeks. Prerequisites: Aero. 300, 301, 310, 311, 330, 331, and concurrent enrollment in Aero. 350. Application of aircraft covering material, aircraft painting, rig rotary and fixed wing aircraft as specified in Federal Aviation Regulation Part 147.

**360 (57) POWERPLANT MAINTENANCE III (2½).** Five lecture hours per week for 8 weeks. Prerequisites: Aero. 300, 301, 310, 311, 320, 321, 340, 341, and concurrent enrollment in Aero. 361. Theory of operation of engine fire detection and control systems, theory of operation and construction of aircraft propellers, and related components as specified in Federal Aviation Regulation Part 147.

**361 (57L) POWERPLANT MAINTENANCE LAB III (4).** Twenty-five hours per week for 8 weeks. Prerequisites: Aero. 300, 301, 310, 311, 320, 321, 340, 341, and concurrent enrollment in Aero. 360. Inspect and repair engine exhaust and cooling systems, repair and balance propellers as specified in Federal Aviation Regulation Part 147.

**370 (58) AIRFRAME MAINTENANCE III (2½).** Five lecture hours per week for 8 weeks. Prerequisites: Aero. 300, 301, 310, 311, 330, 331, 350, 351, and concurrent enrollment in Aero. 371. Theory of operation of aircraft hydraulic pneumatic, oxygen, and auto-pilot systems, other aircraft systems and components as specified in Federal Aviation Regulation Part 147.

**371 (58L) AIRFRAME MAINTENANCE LAB III (4).** Twenty-five lab hours per week for 8 weeks. Prerequisites: Aero. 300, 301, 310, 311, 330, 331, 350, 351, and concurrent enrollment in Aero. 370. Inspect and repair aircraft hydraulic, fuel, pneumatic, and instrument systems and other aircraft components and systems as specified in Federal Aviation Regulation Part 147.

**649 (47) COOPERATIVE EDUCATION (1-4).** (Credit/No credit.) Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133).

**680 (48) SELECTED TOPICS IN AERONAUTICS (1-3).** Hours by arrangement. Selected topics in Aeronautics not covered by regular catalog offerings. Course content and unit credit to be determined by the Technology Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Anthropology

**110 (2) CULTURAL ANTHROPOLOGY (3).** Three lecture hours per week. Study of culture as the man-made environment of particular societies. Introduction to the anthropological point of view. Cross-cultural comparisons of cultural practices in specific societies and sub-cultures, including contemporary ethnic groups in the United States.

**125 (1) PHYSICAL ANTHROPOLOGY (3).** Three lecture hours per week. Man's place in nature. Topics include man's evolution, genetics and racial variation. Evolutionary basis of man's behavior and social systems. (Identical to Biology 125.) Nat 501

**130 (3) PREHISTORY (3).** Three lecture hours per week. Archaeological theory and method; geological time sequences of biological and cultural evolution in the Old and New Worlds. Man's existence from his paleolithic beginnings over two million years ago, from the neolithic revolution to the advent of civilization and writing.

**140 (4) ARCHAEOLOGY: FIELD EXCAVATIONS (3).** Three lecture hours and 2½ lab hours per week. Theoretical and methodological procedures in field archaeology, including scientific excavation of prehistoric San Mateo County archaeological sites, processing and cataloging of artifacts, burials and cultural features. (Fall only.)

**180 (18) PRIMITIVE RELIGION (3).** Three lecture hours per week. A cross-cultural study of preliterate societies' beliefs about the nature of reality, and their religious, scientific, and magical practices as a consequence of these beliefs. Primitive techniques for controlling both the natural and the supernatural.

**310 (8) CULTURAL CONTRIBUTIONS OF BROWN AND RED PEOPLES (3).** Three lecture hours per week. Cultural contributions including art, drama, music, dance, and dress patterns intrinsic to the culture of Brown and Red peoples. The significance of each of these art forms to American life and how they have affected the American scene. (Identical to Ethnic Studies 310.)

**680 (48) SELECTED TOPICS IN ANTHROPOLOGY (1-3).** Hours by arrangement. Selected topics in Anthropology not covered by regular catalog offerings. Course content and unit credit to be determined by the Social Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN ANTHROPOLOGY (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Architecture

Students intending to major in Architecture are advised to consult with the architectural counselor in the Math/Science Division before registering.

**100 (10) SURVEY OF CONTEMPORARY ARCHITECTURE (3).** Three lecture hours per week. Basic values in contemporary architecture; its relationship to the environment, the individual and society. The home, the neighborhood, the region. Outstanding architects and

planners and their contributions. Films, slides and individual research.

**110 (14) ESSENTIALS OF DRAFTING (3).** *Two lecture and four lab hours per week.* Introduction to history and principles of graphic communication. Use of instruments, drawing board geometry, lettering, technical sketching, orthographic projection, sectioning and dimensioning, pictorial drawing. Fundamentals of architectural and topographic drafting. Extra supplies may be required. (Fall only.)

**112 (1a) SURVEYING (2).** *Two lecture and 3 lab hours per week for 12 weeks.* Prerequisite: Math 130 or equivalent with grade C or better, or high school preparation including 1½ years of Algebra, one year of Geometry and one semester of Trigonometry with grade C or better. Theory of measurements in surveying; measurement of distance, differential leveling and measurements of angles and directions, stadia techniques and topographic mapping.

**114-115 (7a-7b) BUILDING CONSTRUCTION I and II (3-3).** *Three lecture hours per week. Need not be taken sequentially.* Examines the roles of the people and organizations that comprise the building industry and determines its functioning, followed by study of the characteristics and applications of building materials.

**120 (11) BLACK AND WHITE GRAPHICS (2).** *One lecture and three lab hours per week plus two hours by arrangement.* Prerequisite: Concurrent enrollment in Arch. 210. Representational freehand drawing for Architecture majors, covering perspective, composition and specific techniques in black and white media, including introduction to the use of photography. A single lens reflex camera is required. (May be repeated for a total of 4 semester units.) Extra supplies may be required. (Fall only.)

**125 (13) ARCHITECTURAL PHOTOGRAPHY (2).** *One lecture plus two lab hours per week by arrangement.* Prerequisite: Arch 120 or equivalent. The use of photography as a visual process in the interpretation of architecture. Techniques of preparing a portfolio for transfer to professional schools of architecture. Extra supplies may be required. (Spring only.)

**130 (12) COLOR GRAPHICS (1).** *One lecture and two lab hours per week.* Prerequisite: Concurrent enrollment in Arch. 220. Representational freehand drawing for Architecture majors, covering perspective, composition and specific techniques, using brush and water color. (May be repeated for a total of two semester units.) Extra supplies may be required. (Spring only.)

**140 (15a) PERSPECTIVE DRAWING (2).** *Two lecture and four lab hours per week.* Prerequisite: Arch. 120, Math 115 or equivalent, Arch. 110 or equivalent. Basic techniques in the graphic communication of architects: orthographic and isometric projection, descriptive geometry, mechanical perspective, and shades and shadows. Extra supplies may be required. (Spring only.)

**145 (15b) DELINEATION (3).** *Two lecture and four lab hours per week.* Prerequisites: Arch 120, 130, 140. Three-dimensional representations with various drawing media which will enable the student to express architectural ideas and designs. Extra supplies may be required. (Fall only.)

**150 (16) STATICS (3).** *Three lecture hours per week.* Prerequisite: Concurrent enrollment in Math 241 or 260. The analysis of forces and their effects on rigid body structures by both analytical and graphical methods in two and three dimensions. (Spring only.)

**160 (17) STRENGTH OF MATERIALS (3).** *Three lecture hours per week.* Prerequisite: Arch. 150. Analysis of stresses and deformations caused by forces acting on simple structures; selection of beams, columns and joint configurations in the process of design. Introduction to statically indeterminate structures. (fall only.)

**170 (18) STRESS ANALYSIS (2).** *Two lecture hours per week.* Prerequisites: Arch. 150, 160; Math 241 or 260. Stress analysis of statically determinate and indeterminate structures. Deflection theory. Synthesis and analysis in the structural design process. (Spring only.)

**210 (21) ARCHITECTURAL DESIGN (4)** *Three lecture hours and three lab hours per week plus three hours by arrangement.* Prerequisites: Arch. 110 or equivalent, and concurrent enrollment in Arch. 120. Arch. 110 may be taken concurrently. The principles of Architecture and its unique language. An investigation into the major facets of the profession, from basic design and methods of expression and presentation to the function of an architect, environmental analysis, form and composition. Extra supplies may be required. (Fall only.)

**220 (22) ARCHITECTURAL DESIGN AND MATERIALS (4)** *Three lecture and three lab hours per week plus three hours by arrangement.* Prerequisites: Arch. 210, concurrent enrollment in Arch. 130 and Arch. 150. Principles of architectural design, synthesis of form, space and color, aesthetic and environmental aspects. Introduction to schematic presentation, preliminary studies in spacial relationships involving human and architectural criteria. Introduction to the language and application of building materials. Extra supplies may be required. (Spring only.)



120 Description of Courses (continued)

**230 (23) ARCHITECTURAL DESIGN AND PRACTICE I (4)** *Three lecture and three lab hours per week plus three hours by arrangement. Prerequisite: Arch. 220 and concurrent enrollment in Arch. 160. Recommended: Arch. 112.* Architectural design, involving advanced projects, environmental esthetics and programming as design determinates. Introduction to electrical, mechanical and plumbing systems. Extra supplies may be required. (Fall only.)

**240 (24) ARCHITECTURAL DESIGN AND PRACTICE II (4)** *Three lecture hours and three lab hours per week, plus three hours by arrangement. Prerequisites: Arch. 230 and Arch. 160.* Architectural design involving advanced projects. Introduction to structural systems, details and analysis, with emphasis on integrated design solutions. Introduction to the language of working drawings as a means of architectural communication. Extra supplies may be required. (Spring only.)

**341 (120) LANDSCAPE DESIGN (3)** *Two lecture and three lab hours per week. Prerequisite: Architecture 340.* Advanced graphic techniques, environmental planning and design, planting, structures, engineering, materials, and history of the landscape. (Identical to Horticulture 341.) (Spring only.)

**644 (47) COOPERATIVE EDUCATION (1-4).** (Credit/No Credit) Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**666 (4) INTRODUCTION TO ARCHITECTURE (1)** (Credit/No Credit) *Three lecture hours per week for first six weeks of fall semester.* An intensive introduction to the problems faced by a beginning architecture student; academic and professional requirements, opportunities, available areas of specialization and alternatives. (Fall only.)

**680 (48) SELECTED TOPICS IN ARCHITECTURE (1-3)** *Hours by arrangement.* Selected topics in Architecture not covered by regular catalog offerings. Course content and unit credit to be determined by the Math/Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2)** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two

college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Art

*Studio classes may be taken for credit four times: 206, 207, 224, 232, 238, 242, 352, 353, 355, 405, 406, 412, 414, 416 and 462.*

**101 (1a) HISTORY OF ART I (3)** *Three lecture hours per week.* Ancient, Classic, Early Christian and Medieval art. A survey of man's expression of art from the days of the cave man to the late Middle Ages, with emphasis on architecture and sculpture.

**102 (1b) HISTORY OF ART II (3)** *Three lecture hours per week.* A survey of Gothic, Renaissance and Baroque art. Emphasis on the development of painting from the 14th to the 18th centuries.

**103 (1c) HISTORY OF ART III (3)** *Three lecture hours per week.* A survey of European and American art from mid-18th Century to the present. Emphasis on the development of modern painting as a reaction against earlier traditions.

**106 (1E) SURVEY OF CONTEMPORARY ART (3)** *Three lecture hours per week.* A survey of modern art with an emphasis on present works. Painting, sculpture, ceramics, glass, etc. Field trips to Bay Area galleries and museums are included.

**108 (1F) HISTORY OF AMERICAN ART (3)** *Three lecture hours per week.* A study of art in America, its native artists and its relations to the historical evolution of this country. Emphasis on portraiture, nature and genre painting, realism, fantasy and symbolism.

**111 (10a) INTRODUCTION TO RELATED ARTS (3)** *Three lecture hours per week.* Introduction to painting, music and theatre, stressing basic elements, problems of organization and contemporary experiments with media and forms.

**141 (68a) INTERIOR DESIGN I (3)** *Three lecture hours per week.* Analysis of the modern home: site, design, furnishings and decoration.

**142 (68b) INTERIOR DESIGN II (3)** *Three lecture hours per week.* History of furniture, with examination of "period styles," their influence on modern interior decoration, and their values in solving problems.

**145 (81) BASIC CONCEPTS FOR INTERIOR DESIGN (3)** *Three lecture-critique hours and three lab hours per week.* The nature and control of design elements and principles in two and three dimensions as related to the interior design and problem-solving process.

**146 (83) GRAPHIC INTERIOR DESIGN (3)** *Three lecture-critique hours and three lab hours.* Prerequisite: Art 147. Rendering techniques and styles in executing floor plans and elevations, utilizing the principles of graphic communication; technical sketching, pictorial drawing, sectional views and dimensioning practices.

**147 (82) SPACE PLANNING (3)** *Three lecture-critique hours and three lab hours.* Organization, planning and construction of interior space to satisfy practical and aesthetic needs. The drawing, designing and planning of a residence.

**148 (84) COLOR APPLIED TO INTERIOR (3)** *Three lecture hours per week.* The application of color theory to aesthetic, functional and psychological uses in textile design and interior decorating. The element of color is studied and applied to interiors with consideration to texture, scale, intensity and room arrangement.

**151 (85a) HISTORY OF FURNITURE I (3)** *Three lecture hours per week.* A survey of the furniture and decoration of the Western world from ancient times to the 18th century.

**152 (85b) HISTORY OF FURNITURE II (3)** *Three lecture hours per week.* Prerequisite: Art 151. A study of principal styles of furniture, accessories and architectural details of the 18th century, through contemporary furniture and decoration of the 20th century.

**155 (88) INTERIOR DESIGN WORKSHOP (3)** *Three lecture-critique hours and three lab hours per week.* Prerequisites: Art 145, 146, 147, 148, 151, 152, 450. Development of contemporary and period design in interiors and furniture. Learning to work with the client, suppliers, contractors and architects, estimating, bids, and contracts.

**156 (89) INTERIOR DESIGN PORTFOLIO (1)** *Three lecture hours per week.* Prerequisite: Art 155. An occupational course for the advanced student in Interior Design, emphasizing professional presentation of interior design projects to potential clients and potential employers.

**157 (80) INTERIOR DESIGN MANAGEMENT (3).** *Three lecture hours per week.* Prerequisites: Art 145, 147 and 146. Instruction in retail and wholesale proce-

dures. Merchandising, licensing, purchasing and pricing of furnishings. The communication of ideas: designer-client relations and business practices.

**201 (2a) FORM AND COMPOSITION I (3).** *Three lecture-critique hours and three lab hours per week.* Study of three-dimensional form and space relationship, with black and white rendering of line, mass and values through a sequence of original problems based on underlying geometric forms.

**202 (2b) FORM AND COMPOSITION II (3).** *Three lecture-critique hours and three lab hours per week.* Prerequisite: Art 201. Advanced composition; further study of three-dimensional form, in black and white and color; illustration; experimental pictorial composition.

**206 (52) FIGURE DRAWING (2).** *Two lecture-critique hours and two lab hours per week.* Drawing the human figure from both live models and plaster anatomical casts using charcoal, conte and ink. Emphasis is on proportion, action, structure, form and foreshortening. (May be repeated for credit.)

**207 (15) LIFE DRAWING (3).** *Three lecture-critique hours and three lab hours per week.* Prerequisite: Art 201. The human figure in action and repose, from the standpoint of classical and modern artistic anatomy, with lecture demonstration on the skeleton, musculature and surface forms. Drawing in various media from the nude model, as a basis for figure and portrait painting and sculpture. (May be repeated for credit.)

**214 (3) COLOR (3).** *Three lecture-critique hours and three lab hours per week.* Prerequisite: Art 201, 301. Course study is based on the psychological perception of color and the aesthetics of harmony. Stressed is the use of color for all areas of visual communication, and not the usual class approach of mixing color.

**223 (6a) OIL PAINTING I (3).** *Three lecture-critique hours and three lab hours per week.* Prerequisite: 201-202; 214 recommended. Introduction to basic techniques as applied to still-life, landscape, the human figure. Emphasis on the use of value, color and light to model forms and create the illusion of 3D objects in space.

**224 (6b) OIL PAINTING II (3).** *Three lecture-critique hours and three lab hours per week.* Prerequisite: Art 223. Continuation of Art 223 with increased emphasis on technique, color and composition as a means of achieving personal expression. (May be repeated for credit.)

**231 (7a) WATERCOLOR I (3).** *Three lecture-critique hours and three lab hours per week. Prerequisite: Art 201; Art 214 recommended.* Through exercises and renderings, the student is made familiar with the various approaches and styles of watercolor; the importance of transparent washes, their effects and possibilities. Materials, color, moisture and the importance of light and dark to show form are studied.

**232 (7b) WATERCOLOR II (3).** *Three lecture-critique hours and three lab hours per week. Prerequisite: Art 213.* A continuation of Art 231, with emphasis on more painting experience in various styles and techniques in watercolor, such as an addition of opaque paints and the use of collage to extend the painting experience. (May be repeated for credit.)

**237 (17a) ETCHING I (3).** *Three lecture-critique hours and three lab hours per week. Prerequisite: Art 201.* An introduction to the Intaglio etching process as a fine art, with emphasis on traditional methods in the practice of engraving, the timed etch in line and aquatint, soft ground, lift, drypoint, and mezzotint and their printing in value and color. (Extra supplies may be required.)

**238 (17b) ETCHING II (3).** *Three lecture-critique hours and three lab hours per week. Prerequisite: Art 237.* An advanced course in Intaglio etching as a fine art, with emphasis on contemporary methods of color printing. (Extra supplies may be required. May be repeated for credit.)

**241 (62a) SILKSCREEN I (2)** *Two lecture-critique hours and two lab hours per week.* Introduction to serigraphy; making the frame, mixing the ink, developing the stencil processes of paper, glue, varnish and tusch methods, as well as the photo-emulsion process. (Extra supplies may be required.)

**242 (62b) SILKSCREEN II (2).** *Two lecture-critique hours and two lab hours per week. Prerequisite: Art 241.* Advanced silkscreening problems designed to encourage student experimentation in utilizing serigraphic techniques for visual presentation. (Extra supplies may be required. May be repeated for credit.)

**301 (5a) DESIGN (3).** *Three lecture-critique hours and three lab hours per week.* Development of problems dealing with two-dimensional design, such as repeat pattern, collage, mosaic, texture and line studies. Exploration of media and techniques is encouraged.

**305 (5b) THREE-DIMENSIONAL DESIGN (3).** *Three lecture-critique hours and three lab hours per week. Prerequisite: Art 301.* Volume line and space studies

using paper, wire, wood, string and plaster of paris construction. Mobiles, stabiles and similar objects are created.

**310 (12) LETTERING (3).** *Three lecture-critique hours per week.* Development of proficiency in the freehand and mechanical lettering of the three main alphabetical types—Gothic, Roman, and Text—with variations of these types. Emphasis is on letter proportions, character of style and proper spacing of letters and words.

**328 (51) RENDERING TECHNIQUES (3).** *Three lecture-critique hours and three lab hours per week. Prerequisites: Art 201, 202 and Art 301.* Illustration techniques and tools of the commercial artist; professional procedure in developing rendering; development of an illustration from a pencil rough to a finished comprehensive.

**336 (70) PORTFOLIO (1).** *Three lab hours per week. Prerequisite: Sophomore standing.* Preparation of art and course work for a portfolio. The instructor will analyze, evaluate and suggest to the student the quality of work necessary for portfolio presentation to art schools, colleges, universities and agencies. Instruction in portfolio organization, selection of work, matting, labeling and defining the objective of the art work.

**350 (40) VISUAL PERCEPTION (3).** *Three lecture-critique hours per week.* Visual exploration into natural forms and man-made objects as an expression of art, with emphasis on their relationship to the elements of design. In-depth study of photography, art and design. Field trips to museums and galleries. (Extra supplies may be required.)

**351 (41a) PHOTOGRAPHY I (3).** *Three lecture-critique hours and three lab hours per week. Prerequisite: Art 350, 201, or 301 or concurrent enrollment.* Introduction to basic black and white photographic skills and equipment. Precise methods of negative developing, printing, and finishing the fine photograph. Extensive darkroom work. Portfolio is produced. (Extra supplies may be required.)

**352 (41b) PHOTOGRAPHY II (3).** *Three lecture-critique hours and three lab hours per week. Prerequisite: Art 351.* For students who have basic black and white camera and darkroom skills. Refinement of visual and technical skills. Advanced exposure and development techniques applied to fine printmaking. Portfolio is produced. (Extra supply charges may be required. May be repeated for credit.)

**353 (41c) PHOTOGRAPHY III (3).** Three lecture-critique hours and three lab hours per week. Prerequisite: Art 351. The broader aspects of technical perfection and visual awareness. Contemporary and creative forms of photography presentations are explored, with emphasis on experimental techniques. (Extra supplies may be required. May be repeated for credit.)

**354 (43a) COLOR PHOTOGRAPHY I (3).** Three lecture-critique hours and three lab hours per week. Prerequisite: Art 351. Introduction to the use of color materials as an expressive media. Special emphasis on color exposure, transparency and negative development, and the subtractive method of color printing. (Extra supplies may be required.)

**355 (43b) COLOR PHOTOGRAPHY II (3).** Three lecture-critique hours and three lab hours per week. Prerequisite: Art 354. Continuation of Art 354, with emphasis on more refined control of color materials and more cohesive portfolio. (Extra supplies may be required. May be repeated for credit.)

**405 (22) SCULPTURE I (3).** Three lecture-critique hours and three lab hours per week. Beginning clay modeling and an introduction to stone carving. Projects deal with both abstract and human forms. Nude models are used. Analysis of form for realistic expression is stressed in dealing with the human form. (May be repeated for credit. Extra supplies may be required.)

**411 (20a) CERAMICS I (3).** Three lecture-critique hours and three lab hours per week. Elementary clay construction including pinch, coil and slab; methods of ornamentation, glazing and firing; introduction to the potter's wheel. (Extra supplies are required.)

**412 (20b) CERAMICS II (3).** Three lecture-critique hours and three lab hours per week. Continuation and advanced study of topics introduced in Art 411. (Extra supplies are required. May be repeated for credit.)

**413 (25a) BRONZE CASTING I (3).** Three lecture-critique hours and three lab hours per week. Fundamental procedures and techniques in all phases of lost-wax casting, mold making, wax forming, fabrication, foundry procedures and finishing. (Extra supplies may be required.)

**414 (25b) BRONZE CASTING II (3).** Three lecture-critique hours and three lab hours per week. Prerequisite: Art 413. Continuation of fundamental procedures and techniques introduced in Art 413; working in traditional and contemporary casting. (Extra supplies may be required. May be repeated for credit.)

**415 (21a) STAINED GLASS DESIGN (3).** Three lecture-critique hours and three lab hours per week. An introduction to the study of flat glass design. Theory and practice of designing and applying materials to stained glass. (Extra supplies may be required. May be repeated for credit.)

**416 (21b) GLASS BLOWING (3).** Three lecture-critique hours and three lab hours per week. An introduction to the study of glass blowing. (Extra supplies may be required. May be repeated for credit.)

**450 (87) MATERIALS AND APPLICATION (3).** Three lecture hours per week. An analysis of the functional use and aesthetic effect of various materials, including synthetics, masonry, metal, wood, glass, leather, fabric, carpeting, paint, paper and plastics.

**451 (F.A. 16a) FILM HISTORY I (3).** Three lecture hours and two labs per week. The first half of a two-semester survey of the evolution of the motion picture from the earliest efforts of European and American filmmakers through post-World War II productions. Emphasis on film appreciation, the language of film and analysis for full film enjoyment. (Identical to Lit. 451.)

**452 (F.A. 16b) FILM HISTORY II (3).** Three lecture hours and two labs per week. The second half of a two-semester survey of the evolution of the motion picture from the earliest efforts of European and American filmmakers through post-World War II productions. Emphasis on film appreciation, the language of film and analysis for full film enjoyment. (Identical to Lit. 452.)

**461 (F.A. 15a) FILMMAKING I (4).** Three lecture hours and six lab hours per week. Introduction to film theory, aesthetics, and 8mm production; includes screenplay writing and critical writing, as well as crew work on videotape productions and super-8mm motion pictures. (Identical to Lit. 461.)

**462 (F.A. 15b) FILMMAKING II (4).** Three lecture hours and six lab hours per week. Prerequisite: Art 461. Advanced theory, aesthetics and 8mm production. Students work on a production crew, as well as write and produce their own motion pictures. (Identical to Lit. 462. May be repeated for credit.)

**644 (47) COOPERATIVE EDUCATION (1-4) (Credit/No Credit.)** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (48) SELECTED TOPICS IN ART (1-3).** Hours by arrangement. Selected topics in Art not covered by regular catalog offerings. Course content and unit credit to be determined by the Fine Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture or lecture-/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Astronomy

**100 (10) INTRODUCTION TO ASTRONOMY (3).** Two lecture and one recitation hour per week. Survey of astronomy satisfying science requirements in state colleges and universities. Includes descriptive material on the solar system, stars, galaxies and life in the universe, together with an introduction to the methods employed by astronomers in gathering information.

**101 ASTRONOMY LABORATORY (1).** Three lab hours per week. Prerequisite: Concurrent enrollment in Astr. 100. Optional introductory astronomy laboratory course, designed to be taken with Astr. 100. Use of planetarium for constellation identification, coordinate systems and basic astronomical measurements of planets, stars and spectra. Occasional telescopic observations and visits to observatories. With Astr. 100, satisfies lab science requirements for U.C. and California State Universities.

**102 READINGS IN ASTRONOMY (1).** One lecture hour per week. Prerequisite: Concurrent enrollment in Astr. 100. Optional reading course designed to be taken with Astr. 100. Readings in the literature of astronomy, topics drawn from science fiction, current articles in astronomical journals. Explores influence of astronomical ideas on popular literature.

**107 (7) THE NAKED-EYE SKY (1).** Three lecture hours per week for six weeks. Introduction to the sky as seen without a telescope. Constellations and mythology; use of star charts and coordinate systems; motion of sun, moon, planets; eclipses and other special configurations.

**110 (15) THEORIES OF THE UNIVERSE (3).** Three lecture hours per week. Prerequisite: Astro. 100. Current topics, theories and problems of modern astronomy, including the origin and evolution of the solar system, the stars and the universe, and the phenomenon of life in the universe. Readings from current journals. Occasional observation sessions.

**120 (16) LIFE IN THE UNIVERSE (3).** Three lecture hours per week. Prerequisite: Astro. 100. Study of formation of planetary systems. Likelihood of development of life elsewhere and its detection. Emergence of intelligence and prospect of communication with extraterrestrial civilizations.

**130 (1) GENERAL ASTRONOMY (4).** Three lecture and three lab hours per week. Prerequisite: Plane Geometry and Intermediate Algebra. A survey of current concepts of the universe with an emphasis on the physical principles involved. Designed primarily for science majors. Astronomical tools and techniques, the solar system, the stars, the galaxies, cosmology.

**680 (48) SELECTED TOPICS IN ASTRONOMY (1-3).** Hours by arrangement. Selected topics in Astronomy not covered by regular catalog offerings. Course content and unit credit to be determined by the Math/Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally receive credit for only one Special Project per semester.)

## Biology

**100 (1) INTRODUCTION TO THE LIFE SCIENCES (3).** Three lecture hours per week. Fundamental principles of life. The awareness of plant and animal interrelations and interdependencies. Man's role in the world of living things is examined in relation to contemporary problems. (This course is intended for non-science majors with no previous experience in the biological sciences.)

**102 (15) ESSENTIALS OF CONSERVATION (3).** Three lecture hours per week. Consideration of the national resources of the U.S., including forests, grasslands,



wildlife, water, marine, soils, minerals, and recreational problems and practices in resource management.

**106 (5) INTRODUCTION TO ECOLOGY (3).** *Three lecture hours per week.* Emphasis on ecology and natural history of California. The ecological aspects of the plant and animal groups and their controls by geology, climate, each other, and by man. One or two field trips may be required.

**110 (2) GENERAL PRINCIPLES BIOLOGY (4).** *Three lecture hours and three lab hours per week.* A study of the principles of the biological sciences. Topics include: origin and evolution of life, cellular nature of living things, genetics, ecology, life cycles, and natural history. One or two field trips may be required. Extra supplies may be required.

**112-113-114-115-116-117-118-119 (40) NATURE STUDY (1 unit each).** *Two lecture and two lab hours per week for five and one-half weeks. Prerequisite: One course in the biological sciences.* Each semester three of the following one-unit courses will be offered: 112 — Birds, 113 — Reptiles and Amphibians, 114 — Native Trees, 115 — Insects, 116 — Fishes, 117 — Wildflowers, 118 — Marine Life, 119 — Mammals. Each course introduces students to the means of identifying the organisms, their life histories and how they relate to the environment. Emphasis will be on native Northern California communities.

**125 (11) PHYSICAL ANTHROPOLOGY (3).** *Three lecture hours per week.* Man's place in nature. Topics include man's evolution, genetics and racial variation. Evolutionary basis of man's behavior and social systems. (Identical to Anthropology 125.)

**130 (7) THE HUMAN MACHINE (3).** *Three lecture hours per week. Prerequisite: Biology 100 or 110.* Study of the human body, its anatomy and physiology. The relationship of the cell to functional systems, i.e., nervous system, respiratory system, endocrine system. Recommended for students in the vocational nursing and medical assisting programs.

**137 (12) PSYCHOSOMATIC ILLNESS (3).** *Three lecture hours per week.* An introduction to the psychosomatic concept of disease and the physiological changes the body undergoes when the mind perceives a life situation as stressful. Basic principles of psychology as they apply to psychosomatic disease; psycho-physiological components of various chronic and acute diseases. Designed to help students identify and appreciate potential stress-inducing situations.

**140 (9) ANIMALS AND MAN (3).** *Three lecture hours per week.* Introduction to animals around us and their relationship to man. Major emphasis on animals as prey, servants, companions and bearers of disease. General education course for non-science majors.

**145 (3) PLANTS AND MAN (3).** *Three lecture hours per week.* Basic principles of the living state as seen in plants. Plant structure and function; plant genetics and evolution; economic and cultural importance of plants to man. One or two field trips may be required.

**150 (30) INTRODUCTION TO MARINE BIOLOGY (3).** *Two lecture and three lab hours per week. Recommended: One college-level Biology course.* Introduction to physical oceanography, marine animals, marine plants and marine ecology. Major emphasis is given to the natural history of marine forms, including their taxonomy, morphology and physiology. Bays, estuaries and oceans are described as habitats.

**160 (33) GENETICS (3).** *Three lecture hours per week. Prerequisite: One course in the Biological Sciences.* Introduction to the principles of heredity in plants and animals with specific reference to inheritance and biochemical genetics. The importance of heredity in evolutionary concepts.

**180 (16) INTRODUCTION TO FORESTRY (3).** *Three lecture hours per week.* Study of the forest as a biological community; scientific and economic basis of forestry, including topics from ecology, dendrology, entomology, pathology, silviculture, mensuration, utilization and economics. Careers in forestry. Field trip may be required.

**182 (17) FORESTRY SURVEYING (3).** *Two lecture and three lab hours per week. Prerequisite: Completion of or concurrent enrollment in Geometry (Math 115.)* Introduction to theory and practice of forest surveying. Instruction in use of forest surveying instruments; hand compass, staff compass, abney levels, topographic and engineer's tape, engineer's level and transit. Field problems. Field trip may be required.

**184 (14) WILDLIFE BIOLOGY.** *Three lecture hours per week plus one field trip.* Study of wildlife species, with emphasis on mammals of the Pacific states: their characteristics, life histories, ecology and economic importance. Introduction to basic wildlife management practices.

**210 (21) GENERAL ZOOLOGY (5).** *Three lecture and six lab hours per week. Prerequisite: High school biology or equivalent with grade C or better.* Introduction

to the principles of animal biology. Topics include: molecular basis of life, structure, function and behavior as seen in invertebrates and selected chordates, ecology, zoogeography, and animal evolution. Extra supplies may be required.

**220 (22) GENERAL BOTANY (5).** *Three lecture and six lab hours per week. Prerequisite: High school biology or equivalent with grade C or better.* Principles of biology as illustrated by plants with emphasis on structure, physiology and reproduction in green plants. Extra supplies may be required.

**230 (27) INTRODUCTION TO CELL BIOLOGY (4).** *Three lecture and three lab hours per week. Prerequisite: Chemistry 210 or Chemistry 410-420.* Evaluation and analysis of the living cell and its component parts. The metabolism of the cell and bioenergetics involved are examined as they relate to cellular development, growth, and reproduction. (Recommended for all Life Science and Medical Science majors.) Extra supplies may be required.

**240 (25) GENERAL MICROBIOLOGY (5).** *Three lecture and six lab hours per week. Prerequisite: Chemistry 210 or Chemistry 410, 420, college-level Biology course. Bio. 230 recommended.* Introduction to the morphology and physiology of microorganisms, their control by chemical and physical means, and their role in the environment, including the disease process. Laboratory techniques in culture and identification. (Recommended for majors requiring a 5-unit course in Microbiology/Bacteriology: Life Sciences, Biochemistry, Nutrition, Pre-Dentistry, Nursing, Agriculture, Sanitary Engineering.) Extra supplies may be required.

**245 (26) GENERAL BACTERIOLOGY (4).** *Two lecture and six lab hours per week. Prerequisite: One semester of a college-level Chemistry course. College-level Biology course recommended.* Introduction to the microbial world, the role of micro-organisms in nature, and host-parasite relationships. (Recommended for majors requiring a 4-unit course in Microbiology/Bacteriology especially Nursing and Allied Medical Science.) Extra supplies may be required. (Fall only.)

**250 (23) ANATOMY (4).** *Three lecture and three lab hours per week. Prerequisite: High school biology or equivalent with grade C or better.* Structure of the human body. Laboratory study and dissection of the human male and female. (Primarily intended for students of Nursing, Physiotherapy, Physical Education and other related fields. Elective for Pre-Dental, Pre-Medical and Pre-Veterinarian students.) Extra supplies may be required. (Fall only.)

**260 (24) INTRODUCTORY PHYSIOLOGY (5).** *Three lecture and six lab hours per week. Prerequisite: One course selected from Biology 210, 250, or 230. A knowledge of elementary chemistry and physics is recommended.* Functions of the organs and systems of the human body. Intended for students of Nursing, Physiotherapy, Physical Education, Psychology and other related fields. Elective for Pre-Dental, Pre-Medical and Pre-Veterinarian students. Extra supplies may be required. (Spring only.)

**314 (4) SELECTED TOPICS IN NUTRITION (3).** *Three lecture hours per week. Recommended: Course in Biology or Nutrition.* Discussion will vary depending upon student interest and current trends. A study of in-born errors in metabolism, iatrogenic malnutrition, diabetes, mineral nutrition, childhood obesity, fasting and starvation, artery and heart disease, cholesterol, nutrition and the pill, and nutrition and dental health.

**320 (8) INTRODUCTION TO PLANT SCIENCE (3).** *Two lecture and three lab hours per week.* Introduction to principles of plant structure, function, and reproduction. (Identical to Horticulture 320.)

**325 (18a)—326 (18b) PLANT AND LANDSCAPE I and II (3-3).** *Two lecture and three lab hours per week.*

**325 —** Growth habits, cultural requirements and landscape uses of ornamental trees adapted to the climates of California. Proper plant maintenance techniques. (Fall only.)

**326 —** Growth habits, cultural requirements and landscape; uses of ornamental shrubs and ground covers adapted to the climates of California. Proper planting and maintenance techniques. (Spring only.)

**327 (19) PLANT GROWING (3).** *Two lecture and three lab hours per week.* Soil, plant and fertilizer relationships. Physical, chemical and biological properties of soils as related to horticulture; soil sampling and testing; application techniques of fertilizer materials and soil amendments. Practical experience in growing plants in the greenhouse. (Identical to Horticulture 327.)

**370 (37) DEVELOPMENT OF BIOLOGICAL CONCEPTS (3).** *Three lecture hours per week. Prerequisites: Twelve or more units of college work and an overall C average or better. One course in Life Science is recommended.* Description of the beginnings, growth and development of science in the ancient cultures, Greek and Mediterranean cultures, and the Dark Ages. Rebirth of science during the Renaissance, historical foundations of modern biology, and modern biological themes.

**410 (41) ANATOMY AND PHYSIOLOGY (5).** *Three lecture and six lab hours per week. Required for AARN Program. Prerequisite: One year of high school biology with grade B or better, or Biology 110 or Biology 130 with grade C or better. An integrated study of basic structures and functions of the human body. Emphasis is on those areas which have a direct correlation with nursing and other health-related fields. Extra supplies may be required.*

**420 (42) MICROBIOLOGY FOR NURSES (4).** *Three lecture, four lab hours, plus one hour by arrangement per week. Required for A.A. Degree Nursing Program. Prerequisite: Biology 410. Basic concepts of the structure and function of micro-organisms, especially as related to the host-parasite relationship. Control and prevention of the infectious diseases of man. (Spring only.)*

**425 (52) ALLIED HEALTH BACTERIOLOGY (2).** *Two lecture hours per week. Prerequisite: Enrollment in the Licensed Vocational Nursing Program. Recommended for Medical Assistants. Introduction to microbiology with emphasis on morphology, physiology, transmission and control of pathogenic forms. (Spring only.)*

**644 (47) COOPERATIVE EDUCATION (1-4). (Credit/No credit.)** *Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)*

**680 (48) SELECTED TOPICS IN BIOLOGY (1-3).** *Hours by arrangement. The topic of this course will be different each semester. It is intended to be a course covering a subject of relevance, but is not intended to be a permanent offering of the Division.*

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)*

## Building Inspection

**680 (48) SELECTED TOPICS IN BUILDING INSPECTION (1-3).** *The topic of this course will be different each semester. It is intended to be a course covering a subject of relevance, which may be offered as a seminar, lecture, or lecture/lab class.*

**700 (63a) TECHNIQUES OF INSPECTION (3).** *Three lecture hours per week. Organization and methods of inspecting soils, excavations, foundations, wood framing, masonry, concrete and steel structures.*

**710 (63b) BUILDING CODE INTERPRETATION (3).** *Three lecture hours per week. Building regulations which pertain to types of construction, areas of construction, height and separation laws, exits of buildings, fire resistance, flame spread and sprinkler systems.*

**720 (63c) ELECTRICAL WIRING INSPECTION (3).** *Three lecture hours per week. Electrical wiring for building inspection, covering single-family dwellings, multi-family dwellings, commercial locations (wiring plans for a store building), industrial locations (power installations), specialized and hazardous locations.*

**730 (63d) PLUMBING INSPECTION (3).** *Three lecture hours per week. Building regulations which pertain to drainage systems, vents and venting, plumbing, water systems, building sewers and gas piping.*

**740 (63e) MECHANICAL CODE (3).** *Three lecture hours per week. Building regulations which pertain to mechanical codes of construction, heating equipment, floor furnaces, wall furnaces, unit heaters, venting, ducts, ventilation systems, refrigeration systems and equipment.*

**750 (63f) NON-STRUCTURAL PLAN CHECK (3).** *Three lecture hours per week. Study of occupancy requirements, types of construction, fire safety and State of California residential insulation requirements.*

## Business

Students graduating with a major in the field of business must meet the following subject requirements: *Mathematics*—A percentile rating of at least 35 on the quantitative part of the SCAT entrance exam, or completion of Bus. 810 with a grade of C or better. It is recommended that Bus. 810 be completed by the end of the second semester. *Bus. 100*—Introduction to Business.

**100 (10) INTRODUCTION TO BUSINESS (3).** *Three lecture hours per week. An introductory survey of the nature, organization and structure of the American free enterprise system. A basic orientation course in business designed to develop a realization of the role of business in the economy and as an aid in selecting a*

field of vocational specialization. (Required of all students majoring in Career Business Programs. Satisfies Mgmt 100 requirement for Management Certificate Program and AA degree.)

**101 (8a) HUMAN RELATIONS I (3).** *Three lecture hours per week.* Application of psychological principles to problems of self-management and personal growth essential for successful living, including interpersonal relationships on the job.

**102 (8b) HUMAN RELATIONS II (3).** *Three lecture hours per week. Prerequisite: Bus. 101.* The study of human behavior and the necessity of taking positive action to achieve better interpersonal relationships. Discussion topics center around personal growth and communication problems in groups and organizations, such as business, community, social group, school and home.

**115 (51) BUSINESS MATHEMATICS (3).** *Three lecture hours per week. Prerequisite: A percentile rating of at least 35 on the quantitative part of the SCAT entrance examination or completion of Bus. 810 with a grade of C or better.* A study of mathematics as applied to business, with emphasis on calculations involving interest, discount, negotiable instruments, financial statements and ratios, inventory pricing, depreciation, present value, central tendency and correlation.

**123 (2) ELEMENTARY STATISTICS (4).** *See Economics 123 (2).*

**129 (93) MACHINE CALCULATION (1-2).** *Five lecture hours per week for 5½ weeks (three 5-week modules per semester). Students may enter at the beginning of any module. Prerequisite: Bus. 810 or equivalent.* Instruction includes electronic display and printing calculators and the touch system of operating the 10-key adding machine. Assignments emphasize actual business situations and problems. The printing calculator is used for the second unit practice set.

**130 (35) PERSONAL MONEY MANAGEMENT (3).** *Three lecture hours per week.* Develops understanding and skill in dealing with family and personal finance problems. Topics include: financial planning, borrowing money, insurance, introduction to investments, estate planning, real estate and taxes.

**140 (81) SECURITY INVESTMENTS (3).** *Three lecture hours per week. Prerequisite: Sophomore standing.* Stocks, bonds and investment trusts; investment policies, evaluation, charting—issues and industries.

**150 (65) SMALL BUSINESS MANAGEMENT (3).** *Three lecture hours per week. Prerequisite: Bus. 100 or Mgmt. 100.* Examination of the opportunities and hazards of small business operation; designed for business students who plan to establish or supervise a small business. Significant areas of vital interest to the prospective independent businessman are explored, including pre-opening requirements.

**151 (18) FASHION MERCHANDISING (3).** *Three lecture hours per week.* Structure of ready-to-wear apparel industry, including the functions and policies of the various types of retail stores as they relate to the promotion of fashion merchandising; consideration of the various factors which affect the merchandising of fashion apparel. (Identical to H. Ec. 151).

**152 (17) FASHION COORDINATING AND DISPLAY (3).** *Two lecture and three lab hours per week.* Study of the elements of fashion which make for success in fashion, merchandising: store windows, interior displays, sales promotion activities and techniques in displaying fashion. (Identical to H. Ec. 152).

**154 (15) FASHION AND THE CONSUMER (3).** *Three lecture hours per week.* A consideration of the apparel needs of the various groups and of many forces (economic, sociological, psychological and technological) which influence the consumer and the fashion market. (Identical to H. Ec. 154).

**160 (123) PUBLIC RELATIONS (3).** *Three lecture hours per week.* Role of public relations in business and industry. The fundamental principles, procedures and tools used in public relations.

**170 (11) SALESMANSHIP FUNDAMENTALS (3).** *Three lecture hours per week. Prerequisite: Business 100 or equivalent.* Covers the role and impact of personal selling in the marketing process. Considers principles and techniques employed effectively in the direct sales process. Includes sales demonstrations by guests from the direct selling field and practical sales presentations by students.

**175 (12) ADVERTISING (3).** *Three lecture hours per week. Not open to first-semester freshmen.* The role of advertising in our economic life, with emphasis on advertising methods and media.

**180 (24) MARKETING (3).** *Three lecture hours per week. Prerequisite: Bus. 100 or Mgmt. 100.* Broad study of marketing principles and methods applicable to both consumer and industrial goods and services. Major topics include retailing and wholesaling consumers'

goods, marketing industrial goods, marketing policies and practices, and government relationship to marketing.

**185 (25) MARKETING RESEARCH (3).** *Three lecture hours per week. Prerequisite: Business 180.* Survey of marketing research and application as a management tool. The approach is essentially practical rather than theoretical.

**190 (16) PRINCIPLES OF RETAILING (3).** *Three lecture hours per week. Prerequisite: Bus. 100, Bus. 810 and 115.* Retail process emphasized include merchandise planning and control, buying and receiving, pricing, sale promotion and customer service.

**201 (BUAD 18a) BUSINESS LAW I (3).** *Three lecture hours per week.* Introduction to law applicable to business, including sources, agencies and procedures for enforcement. Emphasis on nature and function of law through case study analysis in fields of contracts, sales and consumer protection.

**202 (BUAD 18b) BUSINESS LAW II (3).** *Three lecture hours per week. Prerequisite: Bus. 201.* Continuation of 201 with business applications of laws of partnerships, corporations, real property, mortgages and security transactions, trusts, wills, bankruptcy and commercial paper.

**204 (BUAD 18c) GOVERNMENTAL REGULATORY POWER (3).** *Three lecture hours per week. Prerequisite: Enrollment in or completion of one college English course.* Legal environment of business. Evolution, trend and implications of government regulation of business and the economy. Discussion of sources and constitutional limitations of power within the government, together with specific regulatory powers and their administration.

**220 (52) LAW SURVEY FOR THE LAYMAN.** *Three lecture hours per week.* Survey of legal problems which confront people in their everyday lives and personal business activities. Included are the court proceedings, marriage and divorce, real estate, community property, wills and trusts, juvenile and criminal law, accidents and investments.

**270 (70) PRINCIPLES OF TRANSPORTATION (3).** *Three lecture hours per week.* Transportation in our economy; the transportation system with emphasis on rail, air, water, motor and pipeline. Development and regulation of the various modes of transportation, theory of rate-making and government controls, selected carrier problems and transportation policies.

**271 (71) TRAFFIC MANAGEMENT AND PHYSICAL DISTRIBUTION (3).** *Three lecture hours per week. Prerequisite: Bus. 270 or equivalent.* Emphasis on management of physical distribution, including the total cost concept, planning and coordinating the functions of transportation, storage, packaging, handling, inventory and location theory.

**272 (72) REGULATION OF TRANSPORTATION (3).** *Three lecture hours per week. Prerequisite: Bus. 270 or equivalent.* Fundamental principles of laws governing transportation by common carrier. History and development of transport regulation in the United States. Emphasis on Interstate Commerce Act (I.C.A.), Civil Aeronautics Authority (C.A.A.) and Federal Aviation Authority (F.A.A.) practices and procedures.

**273 (73) INTERSTATE AND TRANSCONTINENTAL RAILROAD RATES, RULES AND REGULATIONS (3).** *Three lecture hours per week. Prerequisite: Bus. 270 or one year experience in the traffic or transportation field.* Introduction to the basic structure and use of rail carrier tariffs, particularly those published by Pacific Coast Freight Bureau. Particular attention will be given to those sections of the tariff pertaining to governing rules, regulations, rates and routes. Tariff principals will be related to various types of shipments.

**274 (74) FREIGHT LOSS, DAMAGE, AND CLAIMS LAW (3).** *Three lecture hours per week. Prerequisite: Bus. 270 or equivalent.* Basic principles, procedures, and laws involved in freight loss, damage, and overcharge. Law of bailments, documentation, carrier liability, exceptions to carriers' liability and informal complaints to I.C.C. and P.U.C.

**275 (75) INTRASTATE AND INTERSTATE MOTOR CARRIER RATES, RULES AND REGULATIONS (3).** *Three lecture hours per week. Prerequisite: Bus. 270 or equivalent.* Basic rules, rates and regulations applicable to intrastate and interstate motor carriers as published in the P.U.C. Tariffs, Western Motor Tariffs and Rocky Mountain Motor Tariff bureaus.

**276 (76) AIR FREIGHT RATES, RULES AND REGULATION (3).** *Three lecture hours per week. Prerequisite: Bus. 270 or equivalent.* Historical development of air transportation with special emphasis on air freight. Application of rates, rules and regulations in domestic and international shipment.

**277 (77) SPECIAL COMMODITIES TRANSPORT AND WAREHOUSE MANAGEMENT (3).** *Three lecture hours per week. Prerequisite: Bus. 270 or equivalent.* Emphasis on transport rates, rules and regulations as



they apply to household effects and electronic shipment. Consideration of the principles and practices of warehouse management and supervision.

**279 IMPORT/EXPORT MANAGEMENT (3).** *Three lecture hours per week. Prerequisite: Bus. 270 or equivalent.* Outlines the role of international business transactions; with emphasis on international sales importing and exporting to and from the United States; documentation and paper work and international transportation; rates, rules and regulations. The role of governments in import/export will also be addressed.

**412 (45) CONSUMER ISSUES AND BUYING PROBLEMS (3).** *Three lecture hours per week.* Study of problems facing the consumer; relationship of quality and cost to food, clothing, housing; resource management, legislation and agencies protecting the consumer. (Identical to H. Ec. 412 and Economics 412.)

**641 (47) COOPERATIVE EDUCATION (1-4). (Credit/No credit.)** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (48) SELECTED TOPICS IN BUSINESS (1-3).** *Hours by arrangement.* Selected topics in Business not covered by regular catalog offerings. Course content and unit credit to be determined by the Business Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN BUSINESS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**810 (50) BUSINESS ARITHMETIC (3).** *Three lecture hours per week. Prerequisite: A percentile rating below 35 on the quantitative part of the SCAT entrance examination. (See Business Division requirement for Business mathematics.)* Fundamental arithmetic operations including the basic processes, fractions, decimals and percentages as applied to ordinary problems of business.

## Career and Personal Development

(formerly Guidance)

**111 (5) DECISIONS (1). (Credit/No credit.)** *Three lecture hours per week for six weeks.* Provides students with opportunities to develop the skills involved in making valid decisions and choices, establishing personal values, and investigating personal growth factors and behavior patterns affecting studying and peer relationships. Satisfies elective requirement for the A.A. degree and G.E. transfer. (May be repeated for credit.)

**132 JOB SEARCH STRATEGY (1). (Credit/No credit.)** *Three lecture hours per week for 6 weeks. Prerequisite: CRER 808, 410, 430 or 133, or equivalent.* Planned to help the student become a successful job applicant. Emphasis on developing the knowledge and skills needed to write a resumé, participate in a job interview, complete follow-up techniques and procedures and develop a plan of action. Assistance in setting short- and long-term goals.

**133 (31) PERSONALIZING CAREER CHOICES (1). (Credit/No credit.)** *Eighteen lecture plus 6 lab hours by arrangement.* An open-entry, individualized career exploration course designed basically for the mature student who prefers to work independently. Course work may be completed at the student's own pace, and consists of a variety of tests to appraise aptitudes, interests and special abilities.

**140 (11) PEER COUNSELING (2-3).** *Three lecture hours per week.* An orientation and training course to develop counseling helping skill. The importance of group interaction, personal and interpersonal growth and understanding and emphatic communication skills will be emphasized. Students will be given the opportunity to work as peer counselors both on and off campus.

**410 (10) INTRODUCTION TO COLLEGE (2).** *Two lecture hours a week. Open to all students but strongly recommended for entering freshmen enrolled in general courses with an "undecided" major, or for students who wish to verify their career and educational choice.* Acquaintance with campus facilities and activities, improvement of study habits and skills, educational planning toward a realistic, meaningful goal. Career planning to discover potential talents by means of tests measuring new interests and aptitudes.

**430 (30) CAREER EXPLORATION (1). (Credit/No credit.)** Three lecture hours plus 1 lab hour per week for 6 weeks by arrangement. A variety of tests given to appraise aptitudes, interests, personal adjustments and special abilities, and to assist students in making effective educational and vocational plans. Designed for students who are undecided about career goals and who wish to explore their interests, abilities and values in a small group setting.

**680 (48) SELECTED TOPICS IN CAREER & PERSONAL DEVELOPMENT (1-3).** Hours by arrangement. Selected topics in Career/Personal Development not covered by regular catalog offerings. Course content and unit credit to be determined in relation to community-student need, and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**808 (8) COLLEGE RE-ENTRY (1-3). (Credit/No credit.)** Three lecture hours per week for 5½ weeks for one unit of credit. Designed for adults whose education has been interrupted. Areas covered include analysis of present abilities and interests, investigation of new directions and objectives, investigation of career opportunities, development of college-level study skills, guidance and counseling for meeting new goals. (May be repeated for credit.)

## Chemistry

**100 (10) SURVEY OF CHEMISTRY (3).** Three lecture hours per week. (Not open to students who have had or are taking Chem. 210.) General survey of the more important concepts and application of Chemistry for non-science majors.

**101 (21) CHEMISTRY FOOD ADDITIVES (1).** Three lecture hours per week for six weeks. Prerequisite: A course in chemistry. General survey of major food components from the standpoint of their chemical structures. The nature of food additives and their postulated metabolic impact. Chemical nature of carbohydrates, proteins, fats and vitamins as found in various foods and as utilized by the body.

**102 (22) CHEMISTRY OF COSMETICS (1).** Three lecture hours per week for six weeks. Prerequisite: A course in chemistry. Chemical composition of major types of cosmetics, deodorants, hair dressing. Effect of

active ingredients on the substrate. Structure of components of major cosmetic categories and their relationship to the desired function.

**103 (23) CHEMISTRY OF GARDENING (1).** Three lecture hours per week for six weeks. Prerequisite: A course in chemistry. Chemical composition of fertilizers, pesticides, and herbicides. Mode of action and critical ingredients; potential side effects. Structures of the active components of commercial, agricultural and gardening aids, and the mechanism of their action.

**104 (24) CHEMISTRY OF PHOTOGRAPHY (1).** Three lecture hours per week for six weeks. Prerequisite: A course in chemistry. Chemical description of black and white and color film construction. Reactions occurring during image formation and processing.

**105 (25) CHEMISTRY OF DRUGS (1).** Three lecture hours per week for six weeks. Prerequisite: A course in chemistry. The structure and mode of action of selected drugs and pharmaceuticals.

**106 (26) CHEMISTRY OF MOTOR FUELS (1).** Three lecture hours per week for six weeks. Prerequisite: A course in chemistry. A description of the manufacture and performance of motor fuels as related to the chemistry of the components.

**107 (27) CHEMISTRY OF POLLUTION (1).** Three lecture hours per week. Prerequisite: A course in chemistry. Chemical nature and origin of pollutants in air and water. Problems of solid waste disposal; elements and compounds found as true contaminants in foods. Chemical problems associated with desmoggling internal combustion engines and recycling of solid wastes.

**210-220 (1a-1b) GENERAL CHEMISTRY I and II (5-5).** Three lecture and six lab hours per week. Prerequisites: 210 — Chem. 890 or high school Chemistry with grade C-plus and two years of high school Mathematics; high school Physics recommended; 220 — Chem. 210 with grade C or better. Intended for students majoring in science fields and chemical engineering.

**210**—Basic principles of atomic and molecular structure and bonding. Chemical reactions and equations, solutions, gas laws, equilibrium; stoichiometry and related calculations. (Extra supplies may be required.)

**210**—Descriptive chemistry of the elements and qualitative analysis. Introduction to nuclear chemistry and

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detailed treatment of electro-chemistry, equilibrium and kinetics. Extra supplies may be required.

**224-225 (11a-11b) ENGINEERING CHEMISTRY I and II (4-4).** Three lecture and three lab hours per week. Prerequisites: Chem. 890 or high school chemistry with grade C and high school mathematics through trigonometry (concurrent enrollment in trigonometry acceptable); high school physics recommended. 225 — Chem. 224 with grade C or better.

**224**—Mole concept and stoichiometry, solutions, gas laws, phase changes, thermo-chemistry, and related calculations. Extensive coverage of atomic theory, intermolecular and intramolecular bonding, with emphasis on applications to materials science. (Extra supplies may be required.)

**225**—Detailed treatment of thermodynamics, equilibrium, electro-chemistry, kinetics, chemistry of complexes and introduction to nuclear chemistry. Extra supplies may be required.

**231 (12a) ORGANIC CHEMISTRY I (5).** Three lecture, one recitation, and five lab hours per week. Prerequisite: Chem. 220 or Chem. 225 with grade C or better. Introduction to basic concepts of structure and reactivity of organic compounds; reactions of major functional groups; reaction mechanisms; synthesis. Principles and practice of laboratory techniques; methods of separation, purification and synthesis. Theory and practice of instrumental methods including spectroscopy. Designed as first semester of one-year organic course, or one-semester overview. Extra supplies may be required.

**232 (12b) ORGANIC CHEMISTRY II (5).** Three lecture, one recitation and five lab hours per week. Prerequisite: Chem. 231 with grade C or better. More rigorous treatment of mechanisms, reactions, and synthesis. Structure determination by degradation and spectroscopy. Laboratory will be implementation of techniques and skills taught in Chem. 231, including identification of unknown compounds and mixtures. Extra supplies may be required.

**250 (5) QUANTITATIVE ANALYSIS (4).** Two lecture and six lab hours per week. Prerequisite: Chem. 220 with grade C or better. Theory, calculations and practice of common analytical procedures. Includes gravimetric, volumetric methods; also colorimetric, potentiometric and other instrumental procedures. Extra supplies may be required.

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SAN MATEO, CALIFORNIA 94402

**260 (7) INTRODUCTION TO PHYSICAL CHEMISTRY (4).** Three lecture and three lab hours per week. Prerequisites: Chem. 210-220, Chem. 250. Properties of matter, solutions, equilibrium, hydrogen ion concentration, thermochemistry and reaction velocity. Extra supplies may be required.

**410-420 (30a-30b) HEALTH SCIENCE CHEMISTRY I and II (4-4).** Three lecture and three lab hours per week. Prerequisites: 410 - high school Algebra; 420-410 with grade C or better.

**410**—An introduction to chemistry for the applied sciences, beginning with scientific measurement and metric system, followed by chemical bonding, solution chemistry, acids and bases, redox reactions, and general aspects of organic chemistry.

**420**—Completes the sequence, concentrating on organic and biochemistry with special emphasis on the chemistry of carbohydrates, lipids, proteins, vitamins and their respective metabolism. Students who have received credit for Chem. 210 cannot receive credit for Chem. 410.

**680 (48) SELECTED TOPICS IN CHEMISTRY (1-3).** Hours by arrangement. Selected topics in chemistry not covered by regular catalog offerings. Course content and unit credit to be determined by the Math/Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class. (Extra supplies may be required.)

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally receive credit for only one Special Project per semester.)

**890 (51) PREPARATORY CHEMISTRY (3).** Two lecture and four lab hours per week. Prerequisite: High school algebra. Chemical nomenclature and formula writing, and mathematical review, including logarithms and exercises in calculations relating to chemistry. (Provides preparation for students who do not have other prerequisites for Chem. 210. Extra supplies may be required.)

## Cooperative Education

**601 and 602 GENERAL CAREER COOPERATIVE WORK EXPERIENCE (1-3) (Credit/No-credit.)** One unit of credit for each five hours of work averaged per week per semester with a maximum of 3 units per semester. Enrollment in 7 units of credit including Cooperative Education is mandatory. Scheduled seminars, individual conferences, and individualized instruction are requirements of the course. Development of desirable employment habits, attitudes, and career awareness under the direction of a college coordinator are the focus of the course. Each student must establish measurable learning objectives appropriate for his or her job. Designed for the student who does not have a specific occupational goal but desires experience on a job. A total of 6 units may be earned over 2 semesters. These units do not transfer. Students with established majors and career goals should enroll in Cooperative Education 641, 642, 643, 644, 646, 647, 648 or 649. The program (called the Parallel Plan) operates concurrently with the daily studies. Through a program of work and study, the relationship between theory and practical application is established. Further information is available in the Instruction Office.

**For Veterans Only:** The Veterans Administration does not approve Cooperative Education 601 and 602 for educational benefits.

**641 through 649 CAREER COOPERATIVE WORK EXPERIENCE EDUCATION (1-4). ALTERNATE SEMESTER (1-8). (Credit/No credit).** Available in each major field of study.

**Occupational Cooperative Work Experience Education (1-4).** One unit of credit for each five hours of work averaged per week per semester, with a maximum of 4 units per semester, with development of appropriate measurable learning objectives. May be repeated for credit up to a grand total of 16 units. Enrollment in 7 units of credit including Cooperative Education is mandatory.

**Alternate Semester (1-8).** Students in the alternate semester program may earn up to 8 units of co-op credit per semester. May be repeated for credit up to a grand total of 16 units.

**Transferability.** A maximum of 12 units may be transferred. Check with your counselor for current information on transferring co-op credit to the California State College and University and University of California systems. Occupational Cooperative Work Experience is in a field related to a career goal and major, supplemented by individual counseling from an instructor-coordinator. There are two basic programs: (1) parallel

plan, part-time work; and (2) alternate semester, alternating work and school each semester.

**For Veterans Only:** The parallel plan qualifies for "institutional course" pay rates; the alternate plan qualifies for "cooperative course" pay rates, as designed by the Veterans Administration. Explanation of these rates is available through the Veterans Affairs Office on campus, 574-6193. The Veterans Administration requires students in the parallel plan program to attend regularly scheduled weekly meetings. This requirement is met by concurrent enrollment in Career & Personal Development 132, 133, 430 or 680.

## Cosmetology

The courses described below are open only to those students accepted in the Cosmetology Program. A grade of C or better is necessary for progression in sequence. Upon successful completion of the program with a C or better, including satisfactory performance on a comprehensive "mock board" examination including both theory and practical performance, the candidate receives a Certificate in Cosmetology and is eligible to write the California Board of Cosmetology examination.

**670 (47) COOPERATIVE EDUCATION (1-4) (Credit/No credit).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator (See Page 133.)

**680 (48) SELECTED TOPICS IN COSMETOLOGY (1-3).** Hours by arrangement. Selected topics in Cosmetology not covered by regular catalog offerings. Course content and unit credit to be determined by the Cosmetology Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**712 (50) FUNDAMENTALS OF COSMETOLOGY I. (Variable to 9).**

**722 (50) FUNDAMENTALS OF COSMETOLOGY II. (Variable to 9).** Twenty hours per week. Five lecture hours and 15 lab hours per week for a maximum of 9

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units; *Cosm.* 712 and 722 may be taken concurrently or in reverse order. Prerequisite: Completion of the twelfth grade recommended. Tenth grade completion or equivalent required by California Board of Cosmetology. Admission to and registration in the Cosmetology program. All subjects covered in *Cosm* 712 and 722 are required for licensing as a Cosmetologist by the California State Board of Cosmetology. (May be repeated for a maximum of 18 units.)

**732 (51) ADVANCED COSMETOLOGY (Variable to 9).**  
**742 (51) ADVANCED COSMETOLOGY (Variable to 9).** Twenty hours per week. Five lecture hours and 15 lab hours per week for a maximum of 9 units. Prerequisite: A minimum of 10 units with a grade C or better in Cosmetology 712 and 722. Continuation of Cosmetology 712-722. (May be repeated for a maximum of 30 units.)

**750 (52) BRUSH-UP (Variable to 10 units).** Lecture and lab hours per week by arrangement for a total of 400 hours. Prerequisite: Cosmetology license, or Cosmetology 732 and 742 with a grade C or better. For supplemental training requirements or out-of-state requirements. Course requirements must be met satisfactorily prior to state examination. (May be repeated for credit.)

**754 (53) MANICURING (Variable to 10).** Five lecture hours and 15 lab hours per week. Prerequisite: Enrollment in Cosmetology curriculum. Training in theory and practice in the art of manicuring and pedicuring in preparation for a licensure by the California State Board of Cosmetology, in that field only. (Total of 350 hours training.)

**760 (91) COSMETOLOGY INSTRUCTION PREP (Variable to 17).** Lecture and lab hours per week by arrangement for a total of 600 hours. Prerequisite: Satisfactory completion of an approved program of Cosmetology training with a minimum of 1600 hours. California Cosmetologist license and approval of department chairman required. A preparatory course of teaching techniques designed to qualify the student for the California State Board of Cosmetology Instructor examination. Requires the student to complete a 600-hour instructor training certificate program. Up to 150 hours may be added to the training, if necessary, to correct deficiencies.

**791 (90a) ADVANCED COSMETOLOGY WORKSHOP I (1½).**

**792 (90b) ADVANCED COSMETOLOGY WORKSHOP II (1).** Fall Semester—791— two lecture, three lab hours per week for nine weeks. (one session offered.) Prerequisite: California Cosmetologist License or com-

pletion of 600 hours of Cosmetology with grade C or better. Spring Semester—792—three lecture hours per week for eight weeks. Prerequisite: See 791.

## Dance

The classes listed below are identical to Physical Education classes with the same title. Students may enroll in either Dance or Physical Education classes, but not both.

**121 (13a) CONTEMPORARY MODERN DANCE I (1).** Two lab hours per week. Fundamentals of contemporary dance technique, body alignment, and basic locomotive movements. Modern dance styles are studied in relation to the significance of a dancer's training.

**122 (13b) CONTEMPORARY MODERN DANCE II (1).** Two lab hours per week. Prerequisite: Dance 121. In-depth study of modern dance techniques, body alignment and locomotive movements. Contemporary dance choreographers and their significance to modern dance are studied.

**130 (14) JAZZ DANCE (1).** Two lab hours per week. Beginning techniques in jazz-stage, jazz movements, fast jazz, jazz rock and blues, plus various jazz combinations.

**141 (12a) BEGINNING BALLET (1).** Two lab hours per week. Beginning study of ballet techniques and style, barre, center floor and dance variations. Modern ballet works are explored.

**143 (12b) INTERMEDIATE BALLET (1).** Two lab hours per week. Prerequisite: Dance 141. Continuation of Dance 141, concentrating on barre, center floor and dance variations. Classic ballet works are explored.

**148 (8) BEGINNING BALLET AND MODERN DANCE (1).** Two lab hours per week. Movement skills, rhythmic structure of dance, qualities of movement, special design and appreciation of dance. Modern ballet and modern dance styles are emphasized in the creation of individual compositions.

**180 (5) FOLK/SQUARE DANCE (1).** Two lab hours per week. Fundamental and basic steps, techniques for leading and following, etiquette and development of rhythm. Square dances and a variety of folk dances.

**360 (6) MOVEMENT AND BODY AWARENESS (1).** Two lab hours per week. A course designed to build a concept of movement for modern daily living; to be-

come aware and perceive the body as an instrument of self-image on purposive movements; and to recognize individual capabilities and limitations.

**380 (10) DANCE AND MOVEMENT FOR THEATRE (2).** *Four lab hours per week.* Movement and body awareness activities for the theatre environment. Dance technique, locomotor movements and various improvisation experiences resulting in choreographic movement studies.

**411 (20a) DANCE PRODUCTION I (1).** *Two lab hours per week. Prerequisite: Dance 148 or 121 and 122.* Choreographic principles of dance composition and stage presentation. Types of dance include primitive, medieval, expressionism, cerebralism, jazz, improvisation, impressionism, formal ballet, modern ballet, Broadway musical, Americana and folk dances.

**412 (20b) DANCE PRODUCTION II (2).** *Two lab hours per week, plus additional hours by arrangement for production. Prerequisite: Dance 411.* A public stage dance performance, with the creation of new works by students directed toward large groups, trios, duets and solos. Participation in the technical and business aspects of student production.

**642 (47) COOPERATIVE EDUCATION (Credit/No credit).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (48) SELECTED TOPICS IN DANCE (1-3).** *Hours by arrangement.* Selected topics in Dance not covered by regular catalog offerings. Course content and unit credit to be determined by the Fine & Performing Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture of lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Data Processing

**110 (Data 50) INTRODUCTION TO DATA PROCESSING (3).** *Three lecture hours per week plus one lab hour per week by arrangement.* Emphasis on a wide

variety of computer applications in social, physical, and life sciences, engineering, medicine, aeronautics, business, education and government, and their implications for the individual and society. Introduction to computer hardware, software and programming.

**120 (Data 97) KEY DATA ENTRY (3).** *Day—five lecture hours per week. Evening—six lecture hours per week. Prerequisite: Knowledge of typing.* Extensive operating experience on 029 and 129 keypunches, and introduction to key to desk equipment. Multi-level program design; practice exercises involving typical business applications, to prepare a student for entry-level employment.

**130 (Data 51) COMPUTER OPERATIONS (4).** *Three lecture and three lab hours per week.* Students should become proficient in the operation of an IBM 360/30, related input/output devices and peripheral (non-computer) equipment.

**140 (Data 52) OPERATING SYSTEMS AND JOB CONTROL LANGUAGE (JCL) (4).** *Three lecture and three lab hours per week. Prerequisite: D.P. 110 or equivalent.* Emphasis on DOS concepts, with a survey of OS. Students design and test JCL for typical job streams and control statements for file-to-file utility and sort/merge programs.

**151 (Data 53a) INTRODUCTION TO COBOL PROGRAMMING (4).** *Three lecture and three lab hours per week. Prerequisite: D.P. 110 or equivalent.* Writing and testing COBOL programs on an IBM-360/30 computer. Emphasis on logic of typical business programs and basic language elements. Included also are debugging techniques, use of reference manuals, program documentation standards and structured programming concepts.

**152 (Data 53b) ADVANCED COBOL PROGRAMMING (4).** *Three lecture and three lab hours per week. Prerequisite: D.P. 151 or equivalent.* Emphasis on processing standard sequential tape and disk files; indexed sequential and random disk files. Experience in writing integrated sets of programs for typical business systems using the team project method.

**160 (Data 54) SYSTEM 360 ASSEMBLER (4).** *Three lecture and three lab hours per week. Prerequisite: One semester's experience or training in any programming language, or equivalent.* Writing and testing ASSEMBLER programs on an IBM-360/30 computer. Emphasis is on solving business-type problems. Includes effective use of modular programming concepts, writing of complex programs utilizing control breaks, head-



ings, and subroutines, and interpretation of core dumps.

**162 (25) FORTRAN PROGRAMMING WITH AN INTRODUCTION TO NUMERICAL AND STATISTICAL METHODS (3).** See *Mathematics* 162.

**170 (Data 55) REPORT PROGRAM GENERATOR (RPG) PROGRAMMING (4).** Three lecture hours and three lab hours per week. Writing and testing RPG programs on an IBM-360/30 computer to process typical business problems involving punched card, printer, magnetic tape, and disk files. Introduction to IBM System 3 hardware and processing techniques.

**180 (Data 56) PL/1 PROGRAMMING (4).** Three lecture hours and three lab hours per week. Prerequisite: One semester's experience or training in any programming language, or equivalent. Writing and testing PL/1 programs on an IBM-360/30 computer. The commercial subsets of PL/1 are stressed; scientific subsets are to be covered in less detail. All forms of input/output design are covered.

**195 (Data 20) ACCOUNTING APPLICATIONS (4).** See *Actg.* 195.

**641 (Data 47) COOPERATIVE EDUCATION (1-4). (Credit/No Credit)** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (Data 48) SELECTED TOPICS IN DATA PROCESSING (1-3).** Hours by arrangement. Selected topics in Data Processing not covered by regular catalog offerings. Course content and unit credit to be determined by the Business Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (Data 49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**695 (106) DATA PROCESSING FIELD PROJECTS (2-4).** Hours by arrangement. Prerequisite: Completion of a course in any programming language, or equivalent. Directed individual study in field projects arranged between the student and the instructor.

## Dental Assisting (One-Year Certificate Program)

**647 (47) COOPERATIVE EDUCATION—HEALTH OCCUPATIONS (1-4). (Credit/No credit).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (48) SELECTED TOPICS IN DENTAL ASSISTING (1-3).** Hours by arrangement. Selected topics in Dental Assisting not covered by regular catalog offering. Course content and unit credit to be determined by the Health and Service Careers Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

The courses described below are open only to those students accepted in the Dental Assisting Program. A grade C or better is necessary for progression in sequence. Upon completion of the program, the candidate receives a Certificate in Dental Assisting and is eligible to write the National Certification Examination and the Registered Dental Assistant examination. The program is open to part-time students.

**711 (51a) OFFICE PROCEDURES I (3).** Two lecture and three lab hours per week. Prerequisite: none. Dental patient records and history. Patient psychology, public relations, office management responsibilities, telephone and written communications, office manual, recall system, office billing, dental jurisprudence and malpractice. (Fall only.)

**712 (51b) OFFICE PROCEDURES II (2).** Two lecture and three lab hours for two weeks. Prerequisite: D.A. 711. Appointment control, daily production records and bookkeeping systems, case presentation. Collection methods, pre-paid dental insurance, expenses and dis-

bursments, office machines, payroll and banking procedures. Employment. (Spring only.)

**713 (51c) OFFICE PROCEDURES III (1).** *Two lecture hours per week for eight weeks. Prerequisite: 712. Continuation of Dental Assisting 712. (Spring only.)*

**721 (52a) DENTAL MATERIALS I (3).** *Two lecture hours per week and 3 lab hours per week. Prerequisite: none. A presentation in safety procedures necessary in the dental laboratory and its equipment. Physical properties with study in dental cements, restoratives, impression materials and gypsum products, designed to develop skills necessary for manipulation both for the dental operator and laboratory. The study of the principles of prosthodontics. (Fall only.)*

**722 (52b) DENTAL MATERIALS II (2).** *One lecture hours and 3 lab hours per week. Prerequisite: D.A. 721. A continuation of Dental Assisting 721 with a study in dental casting and prosthetic procedures. (Spring only.)*

**731 (53a) DENTAL SCIENCE I (3).** *Two lecture hours and 1½ lab hours. Prerequisite: none. Basic introduction to the hard and soft tissues of the oral cavity, tooth morphology, oral embryology, oral histology. Pathological disturbances, pharmacology with introduction to oral health principles including nutrition.*

**732 (53b) DENTAL SCIENCE II (3).** *Three lecture hours per week. Prerequisite: D.A. 731. Further study in the hard and soft tissues of the oral cavity, anatomy of the head and neck. Introduction to the body systems, blood supply of the head and neck and innervation of the teeth. (Spring only.)*

**735 COMMUNICATION IN ALLIED HEALTH PROFESSIONS (I).** *One lecture hour per week. To prepare allied health students to work and communicate effectively with patients, other auxiliaries, practitioners and other health professionals. (Fall only.)*

**741 (54a) CHAIRSIDE PROCEDURES I (3½).** *Two lecture and ten lab hours for first six weeks; two lecture and three lab hours for twelve weeks. Prerequisite: none. Introduction to clinical chairside procedures to be performed at the University of California and the University of the Pacific Schools of Dentistry. Beginning clinical application of chairside assisting techniques. Preparation of the patient and operator area. Study of instrumentation, dental armamentarium, operative and fixed prosthodontic procedures, microbiology, sterilization procedures, dental office emergencies and public health dentistry. (Fall only.)*

**742 (54b) CHAIRSIDE PROCEDURES II (2½).** *Two lecture and three lab hours per week for ten weeks; two lecture and one and one half lab hours per week for eight weeks. Further study in chairside procedures. Emphasis is place on the student's individual development. Study of dental specialities; instrumentation, application, procedure and patient instruction. Introduction to intra-oral functions. DA and RDA levels. (Spring only.)*

**751 (55a) DENTAL CLINIC I (1½). (Credit/No credit).** *Seven lab hours per week for twelve weeks. Prerequisite: concurrent enrollment in 742. Transfer of chairside theory to practical experience at local dental schools and community health centers. (Fall only.)*

**752 (55b) DENTAL CLINIC II (1). (Credit/No credit).** *Seven lab hours per week for ten weeks. Prerequisite: D. A. 751 with a C or better and concurrent enrollment in 742. Continuation of applying chairside theory to practical experience at local dental schools and community health center. (Spring only.)*

**761 (56a) DENTAL RADIOLOGY I (2).** *One lecture and three lab hours per week. Prerequisite: none: Study of radiation; history, terminology, legislation, characteristics, effects of exposure, protection and monitoring, types of dental film, developing and processing procedures. Exposing techniques using the parallel technology; mounting and filing of X-Ray and identification and correction of faulty films. (Fall only.)*

**762 (56b) DENTAL RADIOLOGY II (1½).** *One lecture and three lab hours per week for ten weeks, one lecture and one and one half lab hours for eight weeks. Prerequisite: D.A. 761. Continuation of D.A. 761. Designed to provide further depth in the areas of dental radiography. Emphasis is placed on the students individual development. Study of pedodontic, occlusal and edentulous exposures. The bisection of the angle technique, normal structures, anatomical landmarks and extra oral films. Continued practice in exposing, developing and processing, mounting and evaluation of films. (Spring only.)*

**771 (61) CORONAL POLISH (½).** *Six lecture hours and 6 lab hours per semester. Prerequisites: D.A. 751 and 751. Instruction in an intra oral function performed after successful completion of the RDA examination which the dental assisting student can write upon completion of the Dental Assisting program. Instruction includes the recognition of stains upon the clinical and anatomical crowns of the teeth and removal of such.*

## Drafting Technology

Equipment may be required in all Drafting Technology courses.

**120 (14) PRINCIPLES OF TECHNICAL DRAWING (3).** Two lecture and four lab hours per week. Basic mechanical drawing with instruction surveying the field of graphic communications; technical sketching, visualization, descriptive geometry, orthographic projection, geometric construction, pictorial drawing methods, sectional views, auxiliary views, developments, dimensionings, fasteners, welding, electro-mechanical, piping, tooling, structural and architectural draft principles.

**201-202 (52a-52b) TECHNICAL DRAFTING I and II (5-5).** Five three-hour lab periods per week. Prerequisites: 201 — Concurrent enrollment in D.T. 711, 202 — Concurrent enrollment in D.T. 712, a grade of C or better in D.T. 201, and completion of D.T. 711.

**201**—Multi-view drawing, lettering, geometric shape, description, sections, descriptive geometry, sketching, dimensioning, reproduction processes, charts and graphs.

**202**—Working drawing, threads and fasteners, gears, tolerancing, pictorial, projections, intersections, developments and assembly drawings.

**301-302 (62a-62b) ADVANCED TECHNICAL DRAFTING I and II (5-5).** Five three-hour laboratory periods per week. Prerequisite: Grade C or better in D.T. 201, 202.

**301**—Cams, assembly drawings, geometric and true positional tolerances, welding, jigs and fixture design and structural drawings.

**302**—Topographic drafting, production illustration, electrical and electronic drafting, pneumatics, hydraulics, piping, and documentation with metric valves.

**400 (63) BASIC TECHNICAL DESIGN (3).** Three lecture hours per week. Prerequisites: Tech. 120, concurrent enrollment in D.T. 301. Application of the materials covered in Tech. 120 to the solution of design problems. Topics include problems of producibility, value engineering reliability and metrication; numerically-controlled machines and programs.

**680 (48) SELECTED TOPICS IN DRAFTING TECHNOLOGY (1-3).** Hours by arrangement. Selected topics in Drafting Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Technology Division in relation to com-

munity-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**711-712 (51a-51b) APPLIED DRAFTING MATHEMATICS I and II (3-3).** Three lecture hours per week. Prerequisite: Concurrent enrollment in D.T. 201-202. One of the required courses for technical drafting students, including review and instruction in basic arithmetic, elementary algebra, plane geometry, logarithms, practical plane trigonometry and the use of electronic pocket calculators.

**721-722 (102a-102b) BASIC TECHNICAL DRAFTING I and II (3-3).** Two lecture and four lab hours per week. Prerequisites: 721, None; 722, D.T. 721 or D.T. 120.

**721**—Sketches, lettering, orthographic projection, geometric constructions, sections, auxiliary views, shop processes.

**722**—Continued practice in preparation of working drawings including tolerancing, assembly drawings, and the use of engineering change notices.

**731-732 (112a-112b) TECHNICAL DRAFTING I and II (3-3).** Two three-hour labs per week. Prerequisites: D.T. 731-D.T. 721, 120; 732-721, 722, 731.

**731** — Projections, points, lines, planes, revolutions, intersections, surfaces and sheet metal practices.

**732** — Gears and cams, with emphasis on calculations and terminology. Dimensioning, tolerancing, quality control, assembly and welding drawings.

**740 (122) ELECTRONICS DRAFTING (3).** Two lecture and four lab hours per week. Prerequisites: D.T. 120 or equivalent. Electronics 110 or equivalent. Techniques of preparing the various types of electronic drawings used in industry.

**750 (130) ELEMENTS OF MACHINE DESIGN (3).** Three lecture hours per week. Prerequisite: D.T. 120, or knowledge of drafting fundamentals; Mathematics through Numerical Trigonometry. Techniques of selection and computations for machine elements and for design for compound.

## Drama

**101 (1a) HISTORY OF THEATRE ARTS I (3).** *Three lecture hours per week.* The Classical period to the 18th century. Plays, physical theatres, staging, directing and their relationship to existent cultural forces. Use of audio-visual resources and required play attendance.

**102 (1b) HISTORY OF THEATRE ARTS II (3).** *Three lecture hours per week.* The 18th century to the present. Development and changes in dramatic styles and structure. The 19th century, Ibsen, Chekhov, new stage craft, Brechtian style, theatre of the absurd and living theatre.

**140 (10) INTRODUCTION TO THE THEATRE I (3).** *Three lecture hours per week.* Designed to acquaint the student with the various approaches to a theatre production. Covers nomenclature, duties, responsibilities, traditions, script analysis, approach to a script from the production viewpoint. Lectures and demonstrations covering publicity, music, productions, dance, motion picture and television. Not a performance course.

**200 (14a) FUNDAMENTALS OF ACTING (3).** *Four lecture-critique hours per week.* Introduction to the principles and techniques of acting: pantomime, improvisation, movement, vocal projection, characterization and procedures of rehearsal and performance. Rehearsal scenes are presented on stage.

**201 (14b) PRINCIPLES OF ACTING I (3).** *Four lecture-critique hours per week.* Prerequisite: Drama 200 or equivalent. Review of basics of acting, advanced theories and techniques, style, Stanislavsky method, character analysis, preparation for long scenes.

**202 (14c) PRINCIPLES OF ACTING II (3).** *Four lecture-critique hours per week.* Prerequisite: Drama 201 or equivalent. Continuation and review of acting theories and techniques introduced in Drama 201.

**203 (14d) PRINCIPLES OF ACTING III (3).** *Four lecture-critique hours per week.* Prerequisite: Drama 202 or equivalent. Continuation and review of acting theories and techniques introduced in Drama 201 and 202.

**230 MIME AND MOVEMENT (3).** *1½ lecture, 1½ lab hours per week.* The development of expressive body movement for the actor and dancer. Training in coordination, posture, balance, gesture, stage techniques and traditional mime forms.

**250 (13) LIGHTING (3).** *Two lecture, four lab hours per week.* Methods of lighting for actual plays and musical productions. Theory and practical experience in designing, hanging and working lights for stage productions. One crew assignment required, for which Drama 305 credit is earned. (May be repeated for credit.)

**260 (12) DRAMA TECHNOLOGY (3).** *Two lecture and three lab hours per week.* The theory and craftsmanship of building, rigging, painting and otherwise preparing theatrical settings and properties. Practical experience through executing the technical work for the college's dramatic presentations. (May be repeated for credit.)

**300 (15) PLAY REHEARSAL/PERFORMANCE (1½-2 per play).** *Nine lab hours per week for 8 weeks, plus additional production time.* Prerequisite: Standard tryout. Participation in the presentation of a drama department production as an actor or assistant to the director. Each class will be a specific cast for a particular production. (May be repeated for credit.)

**305 (16) TECHNICAL PRODUCTION (½-3 per play).** *Thirty lab hours per production.* The backstage crew for drama department productions. Scenery movement, props, lighting, sound for mounting a production. Supervised by technical faculty. (May be repeated for credit.)

**338 (17) COSTUME WORKSHOP (½-2 per play).** *Hours for arrangement.* Provides practical experience for fashion and costume students. Design and execution of costumes for a drama department production. (May be repeated for credit.)

**371 CHILDREN'S THEATRE (3).** *One lecture and three lab hours per week.* Presentation of drama designed for viewing by children. Acting techniques, mime, puppetry, play selection, etc. Performances off campus.

**642 (47) COOPERATIVE EDUCATION (1-4). (Credit/No credit.)** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (48) SELECTED TOPICS IN DRAMA (1-3).** *Hours by arrangement.* Selected topics in Drama not covered by regular catalog offerings. Course content and unit credit to be determined by the Fine Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Early Childhood Education

**210 (4) EARLY CHILDHOOD EDUCATION PRINCIPLES AND PRACTICES (3).** Three lecture hours per week. The student will study the history of European and U.S. educational philosophies, as they relate to local and national ECED programs. The student will explore his/her own philosophy and goals of early childhood education. The laboratory experience will require assisting in a variety of ECED settings scheduled and supervised by the instructor.

**211 (5) EARLY CHILDHOOD EDUCATION CURRICULUM (3).** Three lecture hours per week. The course focuses on the theoretical approach to curriculum planning as it relates to the daily and yearly program. Planning creative activities and active participation in all aspects of a nursery school program is required in the demonstration nursery school under the direct supervision of an experienced teacher.

**212 (3) CHILD, FAMILY AND COMMUNITY (3).** Three lecture hours per week. The class will focus on the child's identity, developmental aspects of behavior, cultural and ethnic differences, contemporary family styles, the child within his/her family and the institutions in the community that regulate and provide services to the child and family. The three laboratory hours per week will be scheduled in the demonstration schools under the guidance of a master teacher.

**230 (7) CREATIVE ACTIVITIES (3).** Three lecture hours per week. Directed toward the development of greater sensory awareness of the student through individual participation. By self analysis of experiences, perceptions, and reactions, the creative process will be explored. Field trips and workshops will be interspersed with seminars to foster empathy for the child's feelings and creativity.

**647 (47) COOPERATIVE EDUCATION (1-4) (Credit/No credit).** Work experience in a field related to a

career goal, supplemented by individual counseling from an instructor-coordinator (See Page 133.)

**680 (48) SELECTED TOPICS IN EARLY CHILDHOOD EDUCATION (1-3).** Hours by arrangement. Selected topics in Early Childhood Education not covered by regular catalog offerings. Course content and unit credit to be determined by the Health Service Careers Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally receive credit for only one Special Project per semester.)

## Economics

**100 (1a) PRINCIPLES OF MACRO ECONOMICS (3).** Three lecture hours per week. The American economy; the price system; the role of resources in production; the money and banking system; trends of national income and factors in its determination; problems and policies for stabilization and growth.

**102 (1b) PRINCIPLES OF MICRO ECONOMICS (3).** Three lecture hours per week. Supply, demand and price determination in a market economy; business firm's costs, revenues and price policies under conditions of competition through monopoly; role of government in cases of market failure; determination of wages, rent, interest and profits; international trade and finance; comparative economic systems of other nations.

**108 (10) SURVEY OF ECONOMIC PROBLEMS (3).** Three lecture hours per week. A non-theoretical consideration of the major economic problems which confront the citizen today. Recommended for the general student interested in aspects of consumer economics and current economic problems, and for business and economics majors who desire an introduction to theory courses. (Economics 100 and 102).

**123 (2) INTRODUCTORY STATISTICS (4).** Four lecture hours per week. Prerequisite: Math 125. Descriptive statistics, graphic presentation, measures of central tendency, dispersion, index numbers, time series, sea-

sonal indexes. Introduction to statistical inference, hypotheses testing, type I and type II error, and Chi-square goodness of fit test. (Identical to Bus. 123).

**130 (12) ECONOMIC HISTORY OF EUROPE (3).** *Three lecture hours per week.* Roots of modern economic society traced to European origins. Includes mercantilism, the market system and modern industrialism. Attention is also given to the 20th Century. (Identical to History 130).

**230 (11) ECONOMIC HISTORY OF THE UNITED STATES (3).** *Three lecture hours per week.* Origin and development of the American economy from colonial times to the present. Includes industrial growth, land and resource use, transportation, money and banking, trade patterns, the rise of organized labor, the economic role of government. (Identical to History 230; with History 201 or 202, fulfills American Institutions requirement.)

**250 (15) PUBLIC FINANCE AND TAXATION (3).** *Three lecture hours per week. Prerequisite: Econ. 100 and 102.* Principal sources of government revenues and the expenditures of these revenues. Concerned with such economic problems as the shifting incidence of taxation and the relativity of fiscal problems to the business cycle and to political situations.

**412 (45) CONSUMER ISSUES AND BUYING PROBLEMS (3).** *Three lecture hours per week.* Study of problems facing the consumer; relationship of quality and cost to food, clothing, housing; resource management, legislation and agencies protecting the consumer. (Identical to Bus. 412 and H.Ec. 412.)

**661, 662, 663 (20a, b, c) CURRENT ECONOMIC TOPICS I, II, III (1-1-1).** *Three lecture hours per week for 5½ weeks.* Each module deals with an economic topic of current concern to citizens and assumes no previous knowledge of economics. Each module may be taken independently or in combination with the others. Topics such as: Inflation, Energy; Population; Gold and Dollar Crisis; Socialism; and Women and Employment.

**680 (48) SELECTED TOPICS IN ECONOMICS (1-3).** *Hours by arrangement.* Selected topics in Economics, not covered by regular catalog offerings. Course content and unit credit to be determined by the Social Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN ECONOMICS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or

topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**880 (51) THE ECONOMICS OF THE AUTOMOBILE (2).** *(Credit/No credit). Two lecture hours per week.* How to minimize the cost of automobile ownership. How an automobile works and what tools and procedures are used to maintain its life and reliability. Practical experience in maintaining and evaluating the used car. (Extra supplies may be required.) May be repeated for credit.

## Education

**100 (1) INTRODUCTION (3).** *Three lecture hours per week.* Career opportunities in education, the financial and legal aspects of teaching, the organization of the public school systems, teacher education and teacher certification. Emphasis is placed on planning for a career in education.

**647 (47) COOPERATIVE EDUCATION (1-4).** *(Credit/No-credit).* Work experience in a field related to a career goal. The work experience is supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (48) SELECTED TOPICS IN EDUCATION (1-3).** *Hours by arrangement.* Selected topics in Education not covered by regular catalog offerings. Course content and unit credit to be determined by the Health and Service Careers Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Consent of the instructor and Chairman of the Health and Service Careers Division is required.* Directed individual work in a specific field or topic. Evidence of accomplishment satisfactory to the instructor supervising the project is required.

## Electronics Technology

**100 (10) INTRODUCTION TO ELECTRONICS (3).** *Three lecture hours per week. (Not open to Electronics Technology majors.)* Basic electronics with a descriptive presentation and a non-mathematical



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approach. The influence of electronics in all phases of business, science and daily life is stressed, with emphasis on electronic systems.

**110 (14) FUNDAMENTALS OF ELECTRONICS (3).** *Two lecture and three lab hours per week.* Basic electronic components and circuits are covered using a non-mathematical approach. Laboratory experiences are provided in the use of the basic instruments.

**115 ELECTRONICS SOLDERING TECHNIQUES (1).** *One lecture hour and three lab hours per week for eight weeks.* Soldering techniques and skills are applied to wire, components and printed circuits. Proper choice, use and care of hand tools will be covered. Emphasis on neatness as well as workmanship will be stressed.

**200 PASSIVE CIRCUITS AND DEVICES (5).** *Three lecture and six lab hours per week.* Prerequisite: One year of high school algebra with grade of C or better. Study of the circuit action of significant combinations of resistance, capacitance, and inductance. Experiments and procedures parallel the lecture material presented. The use of basic electronic measuring equipment is stressed. (Extra supplies may be required.)

**230 APPLIED ELECTRONIC MATHEMATICS (3).** *Three lecture hours per week.* Prerequisite: One year of high school algebra with a grade of C or better. Basic applications of algebra to the solution of problems involving direct-current circuits; elements of trigonometry, logarithms, complex numbers and vector methods as applied to alternating current circuits and high-transmission lines.

**250 ACTIVE ELECTRONIC DEVICES & CIRCUITS (5).** *Three lecture hours and six lab hours per week.* Prerequisite: E.T. 200 and concurrent enrollment in E.T. 252. Study of the characteristics of active electronic devices such as bi-polar and field-effect transistors, thyristors and vacuum devices. Application of these devices in simple electronic circuits.

**252 INSTRUMENTS AND SYSTEMS MEASUREMENTS (2).** *One lecture hour, three lab hours per week.* Prerequisite: E.T. 200 or equivalent qualification, concurrent enrollment in E.T. 250. A study of measuring equipment and techniques as applied to electronic devices, linear circuits, audio and other electronic systems.

**260 DIGITAL LOGIC CIRCUITS I (3).** *Two lecture hours, three lab hours per week.* Prerequisites: E.T. 110 or equivalent qualifications. A study of characteris-

tics of digital electronic circuits that utilize such IC devices as gates, flip-flops and memories.

**280 ELECTRICAL/MECHANICAL ASSEMBLY TECHNOLOGY I (2).** *One lecture hour, three lab hours per week.* Prerequisite: Concurrent enrollment in E.T. 250 or equivalent background. Basic hand skills required of electronics technicians. Familiarization with fabrication and assembly techniques typical of the electronics industry, with emphasis on quality of workmanship. (Extra supplies required.)

**300 ANALYSIS LINEAR CIRCUITS (4).** *Two lecture hours, six lab hours per week.* Prerequisites: E.T. 250 or equivalent qualifications. Study of multi-stage linear discrete and IC circuit such as amplifiers. Oscillators and regulators.

**302 MODULATION/DEMODULATION AND SIGNAL PROCESSING SYSTEMS (3).** *Two lecture hours, three lab hours per week.* Prerequisites: E.T. 252 or equivalent qualifications. Study of the signal processing functions relative to modulation and demodulation of intelligence signals as used in audio and video communications systems.

**310 DIGITAL LOGIC CIRCUITS II (3).** *Two lecture hours, three lab hours per week.* Prerequisite: E.T. 260 or equivalent qualification. A study of the application of basic logic circuits to digital functions such as counting, encoding/decoding, storing, computing, processing and controlling.

**330 ELEC/MECH ASSEMBLY TECH II (2).** *One lecture hour, three lab hours per week.* Prerequisite: Successful completion of E.T. 280 or equivalent industrial experience. Familiarization with industrial prototyping techniques. To provide instruction in printed circuit layout including artwork, photography and fabrication. (Extra supplies required.)

**350 ADVANCED CIRCUIT APPLICATIONS (4).** *Two lecture hours, six lab hours per week.* Prerequisite: E.T. 300 or equivalent qualifications. Study of pulse and switching circuits, active radio-frequency circuits and advanced IC applications.

**360 DIGITAL SYSTEMS (3).** *Two lecture hours, three lab hours per week.* Prerequisite: E.T. 310 or equivalent qualification. A study of electronic computing and control systems; the microprocessor, its interfaces and applications.

**362 RADIO-FREQUENCY COMMUNICATION (4).** Three lecture hours, three lab hours per week. Prerequisite: E.T. 302 or equivalent qualification. Study of radio-frequency/microwave transmission and reception principles and techniques, including transmission lines and antennas.

**380 PRODUCT DEVELOPMENT (2).** One lecture hour, three lab hours per week. Prerequisite: Successful completion of E.T. 280 and E.T. 330 or equivalent industrial experience. The student is acquainted with RF prototyping techniques and the various phases of product development and packaging. (Extra supplies required.)

**666 (32) CAREER EXPLORATION (1).** Two lecture hours per week for the first 8 weeks of the semester. Introduces students to the industrial field of electronics technology and provides guidance for academic planning in the preparation for future electronics employment.

**680 (48) SELECTED TOPICS IN ELECTRONICS TECHNOLOGY (1-3).** Hours by arrangement. Selected topics in Electronics Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Technology Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**710 (102) DC AND AC ELECTRONICS FUNDAMENTALS (4).** Three lecture and three lab hours per week. Prerequisites: E.T. 110 or previous electronics experience. Theory and practice for advanced study in electronics technology. DC and AC circuit actions of various combinations of resistance, capacitance and inductance. (Extra supplies may be required.)

**720 (122) ACTIVE CIRCUITS AND DEVICES (4).** Three lecture and three lab hours per week. Prerequisite: E.T. 710. Theory and practice in the use of steady-state circuit action of active devices. Significant characteristics and corresponding circuits of solid state devices—resistors, capacitors and/or inductors. (Extra supplies may be required.)

**730 (132) APPLIED LINEAR AMPLIFIER ANALYSES (4).** Three lecture and three lab hours per week. Prerequisite: E.T. 720. Analyses of circuits: review of single stage transistor amplifiers and frequency response, multi-stage direct-coupled amplifiers, negative feedback and amplifiers, operational amplifiers (adders), multipliers, active filters, equalizer tone controls; and power amplifiers, complementary and quasi-complementary.

**740 (133) APPLIED ELECTRONICS CIRCUIT ANALYSES (4).** Three lecture and three lab hours per week. Prerequisite: E.T. 730. Analyses of circuits including power supplier, RF amplifiers, oscillators, non-sine waves and sine waves. FM-AM modulation and integrated circuit applications. (Extra supplies may be required.)

**760 (143) MICROWAVE PRINCIPLES (3).** Three lecture hours per week. Prerequisites: E.T. 730, or equivalent. Study of transmission lines, active and passive microwave devices and their applications that operate in the microwave region.

**765 (70) TELEVISION FUNDAMENTALS (4).** Three lecture hours, three lab hours per week. Prerequisites: Two semesters of electronics or equivalent experience. Basic TV systems: modulation techniques and receivers, including CATV systems. Development of skills necessary for employment in electronic communications industries which require knowledge of TV system. (evening session only.)

## Engineering

**111-112 (1a-1b) PLANE SURVEYING I AND II (3-3).** Two lecture and three lab hours per week. Prerequisite: 111—Math. 130; 112—Engin. 111.

**111**—Theory of measurements with application in surveying; measurements of distance, differential leveling, measurements of angles and directions; field astronomy; systematic random errors, adjustment of observations.

**112**—Route surveys, topographic surveys, earthwork triangulation, U.S. public land surveys; theory of state plane coordinate systems, municipal surveys; introduction to photogrammetry; legal aspects of surveying.

**120 (14) PRINCIPLES OF TECHNICAL DRAWING (3).**

See Drafting Technology 120.

**150 (16) STATICS (3).**

See Architecture 150.

**160 (17) STRENGTH OF MATERIALS (3).**

See Architecture 160.

**200 (20) DESCRIPTIVE GEOMETRY (2).** *Two lecture and four lab hours per week. Prerequisite: Math. 130. Recommended: One year of high school mechanical drawing or Engin. 120.* Fundamental principles of descriptive geometry and their application to engineering problems. Mathematical methods, vectors, truss and space-force polygons. Extra supplies may be required.

**220 (22) ENGINEERING GRAPHICS (2).** *Two lecture and four lab hours per week. Prerequisite: Engin. 200; Math. 260 or Math. 241 (may be taken concurrently.)* Graphic mathematics, data representation, nomography and graphical calculus. Engineering sketches and working drawings. Introduction to engineering design principles and documentation by means of a student-designed apparatus. Extra supplies may be required.

**230 (35) ENGINEERING STATICS (3).** *Three lecture hours per week. Prerequisite: Math. 260 or Math. 241. Recommended: Engin. 200.* Plane and space force systems; vector algebra, equilibrium problems covering structures, machines, distributed force systems, friction, moments of inertia, and virtual work.

**260 (38) CIRCUITS AND DEVICES (3).** *Three lecture hours per week. Prerequisite: Math 262, Physics 260 or equivalent.* Introduction to circuits, natural and forced response, network theorems; characteristics and circuit models of electronic devices and transistor amplifiers.

**270 (45) MATERIALS SCIENCE (3).** *Two lecture and three lab hours per week. Prerequisites: Math 261 and Chem. 210. Recommended: Physics 250.* Introduction to mechanics of solids, atomic and crystal structure, chemical and physical properties, phases of micro structures, solid state transformations, mechanical and thermal treatment alloys. Structure and properties of semiconductors, aggregate materials and polymers.

**644 (47) COOPERATIVE EDUCATION (1-4).** **(Credit/No credit).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133).

**666 (4) CAREERS IN ENGINEERING (1).** **(Credit/No credit).** *Two lecture hours per week for eight weeks.* An intensive introduction to the problems faced by a beginning engineering student; academic and professional requirements, opportunities, available areas of specialization, alternatives. (Fall only.)

**680 (48) SELECTED TOPICS IN ENGINEERING (1-3).** *Hours by arrangement.* Selected topics in Engineering not covered by regular catalog offerings. Course content and unit credit to be determined by the Math/Science Division in relation to community-student need and/or available staff. May be offered as a seminar lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**700 (46) ENGINEERING REVIEW (E.I.T. Exam) (3).** *Three lecture hours per week. Prerequisites: One year of engineering calculus and one year of engineering physics or equivalent.* A survey review of subjects from the several engineering disciplines, including topics selected from engineering mathematics, electricity, statics, dynamics, fluids, thermodynamics and engineering economics; with additional discussion of engineering as a profession. Preparation for the Engineer-In-Training examination (first half of the Professional Engineer examination boards). May be repeated for credit.

## English

(Also see Literature and Reading.)

**English Placement Test**—Required of all entering freshmen. Students transferring to College of San Mateo with credit in college English (a course equivalent to English 100, Interpretation and Composition) will not be required to take the test. It is designed to determine the entrant's ability in reading, the mechanics of writing, and composition. It is used (in addition to other information to determine placement of students in English 100 and other college transfer courses in English.

### The English Program

The English program consists of transfer and non-transfer courses in composition, language, literature, reading and speech. Entering students should enroll first in one of the following courses in composition:

| Transfer Course | Non-Transfer Courses          |
|-----------------|-------------------------------|
| English 100     | English 800 or<br>English 801 |

The English requirement may be completed with an additional three units chosen from the following courses:

| Transfer Courses                    | Non-Transfer Courses                      |
|-------------------------------------|---|
| English 110,<br>120, 130,<br>or 140 | English 802<br>English 860<br>English 880 |
| Speech 100<br>Speech 120            | Reading 802<br>Reading 803<br>Speech 825  |

Note that English 100 is prerequisite for English 110, 120, 130, and 140. English 800 or English 801 is prerequisite for English 802, 860 and 880. English 800 is prerequisite for English 100 except for students who placed in English 100 on the placement test. Reading 802 and 803 may be taken concurrently with any of the other courses in the English/Literature program.

Other English/Literature transfer courses are those numbered below 800; other English/Literature non-transfer courses are those numbered 800 or above.

**100 (11) COMPOSITION (3).** *Three lecture hours per week. Prerequisite: Engl. 800 or appropriate score on placement test.* Practice in writing based on a study of significant essays, poetry, fiction, drama, song lyrics, films, etc.

**110 (12a) INTRODUCTION TO LITERATURE (3).** *Three lecture hours per week. Prerequisite: Engl. 100.* Study of literary types: fiction, drama, and poetry. Reading analysis and discussion of selected works; written reports; oral reading, lectures.

**120 (12b) INTRODUCTION TO POETRY (3).** *Three lecture hours per week. Prerequisite: Engl. 100.* Reading, analysis, and discussion of selected poetry; written reports; oral reading; lectures.

**130 (12c) INTRODUCTION TO FICTION (3).** *Three lecture hours per week. Prerequisite: Engl. 100.* The short story and novel. Reading, analysis and discussion of selected works; written reports; oral readings; lectures.

**140 (12d) INTRODUCTION TO DRAMA (3).** *Three lecture hours per week. Prerequisite: Engl. 100.* Reading, analysis, and discussion of selected dramatic works; written reports; oral readings; lectures.

**161 (9a) CREATIVE WRITING I (3).** *Three lecture hours per week. Prerequisite: Engl. 110, 120, 130 or 140.* The craft of writing short stories, sketches, and poetry. In the spring semester, members of the class may

contribute to College of San Mateo's annual magazine, **Pendulum**.

**162 (9b) CREATIVE WRITING II (3).** *Three lecture hours per week. Prerequisite: Engl. 161.* Further instruction in the craft of writing short stories, sketches, and poetry. In the spring semester, members of the class may contribute to College of San Mateo's annual magazine, **Pendulum**.

**165 (2) ADVANCED COMPOSITION (3).** *Three lecture hours per week. Prerequisite: Engl. 100.* Designed for students who already have some experience with writing both formal and informal essays and want to go further into the techniques of essay and article writing, with particular emphasis on the use of certain devices of fiction: scene-by-scene narration, details, point of view, and dialogue.

**195 (3) TERM PAPER (1).** *Two lecture hours per week for eight weeks.* A short course designed to assist the student who has never had the experience of writing a documented or "research" paper. Emphasizes the process and techniques involved in the actual production of a term paper.

**200 (14) ENGLISH LANGUAGE AND LINGUISTICS (3).** *Three lecture hours per week. Prerequisite: Engl. 100.* Study of historical changes in language from the view of traditional and modern grammatical systems, including an analysis of linguistic concepts. (Spring only)

**210 (13) WORD STUDY (3).** *Three lecture hours per week. Prerequisite: Engl. 100.* Vocabulary course including principles of semantics. Some specific topics covered include etymology, dialects, roots, and combining forms.

**311 (57a) ENGLISH FOR NON-NATIVE SPEAKERS I (1-5).** *Five lecture hours per week. Prerequisite: Diagnostic test.* Study of English grammar and composition, drill in oral and written vocabulary, sentence structure, and English idiom.

**312 (57b) ENGLISH FOR NON-NATIVE SPEAKERS II (1-5).** *Five lecture hours per week. Prerequisite: Engl. 311 or result of placement test and/or placement by foreign student advisor or LES counselor.* Continuation of English 311. Work in spoken skills with an increased emphasis on reading and writing. Open entry until mid-term.

**313 ENGLISH FOR NON-NATIVE SPEAKERS III (1-5).** *Five lecture hours per week. Prerequisite: Placement Test, successful completion of English 312 or rec-*

ommendation of LES instructor or counselor. Practice in listening, speaking, reading and writing. Emphasis on reading and writing. Work with mechanical operations such as spelling, punctuation, sentence structure. Short written compositions weekly. Vocabulary acquisition is an important feature of the course.

**314 ENGLISH FOR LIMITED ENGLISH SPEAKERS IV (1-5).** Five lecture hours per week. Prerequisite: CELT placement test or successful completion of English 313 or recommendation of LES instructor or counselor. Advanced composition for LES student. Successful completion should indicate that the student is capable of succeeding in regular college classes, at least as far as competence in reading and writing pertain to courses taken.

**411 (A/11 and A/11X) INTERMEDIATE COMPOSITION (4).** Three lecture hours and two hours of writing practicum per week. Prerequisite: Engl. 801 or appropriate score on placement test. Practice in writing based on the reading and study of essays, short stories, and poems. Note: The student will receive one unit of credit for the practicum work; the other three units will appear on the transcript as credit for either English 100 or English 800, depending upon the level of achievement as a writer at the end of the semester.

**420 WRITING FOR INDUSTRY (3).** Three lecture hours per week. Training in writing for students in aeronautics, electronics, drafting, engineering, welding, technology, nursing, machine tool technology and other occupational fields. Three units will appear on the transcript as credit for Engl. 100, 800 or 801, depending on original placement and demonstrated ability to write at appropriate technical level of mastery.

**643 (47) COOPERATIVE EDUCATION (1-4). (Credit/No Credit).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See page 133).

**680 (48) SELECTED TOPICS IN ENGLISH (1-3).** Hours by arrangement. Selected topics in English not covered by regular catalog offerings. Course content and unit credit to be determined by the Language Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an

instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**800 (A) WRITING DEVELOPMENT (3).** Three lecture hours per week. Prerequisites: English 801 or appropriate score on placement test. Intensive review of basic skills necessary for college-level composition. Practice in writing to develop and refine specific, overall composition skills. Development of specific reading skills to reinforce the process of writing expository essays. Designed mainly to prepare students to meet competency standards required for entrance into English 100.

**801 (61) BASIC READING AND COMPOSITION (3).** Three lecture hours per week. Practice in reading and writing based on a study of essays, poetry, fiction, drama, song lyrics, films, etc.

**802 (62) READING-INTERPRETATION (3).** Three lecture hours per week. Prerequisite: English 801 or English 800. Study of fiction, drama and poetry. Reading, class discussion; oral readings; lectures; written reports.

**811 (61/A and 61/AX) INTERMEDIATE READING, INTERPRETING, AND COMPOSITION (4).** Three lecture hours and two hours of writing practicum per week. Prerequisite: Appropriate score on placement test. Practice in writing based on the reading and study of essays, short stories and poems. Note: The student will receive one unit of credit for the practicum work; the other three units will appear on the transcript as credit for either English 800 or English 801, depending upon the level of achievement as a writer at the end of the semester.

**860 (63) VOCABULARY (3).** Three lecture hours per week. The use of the dictionary, with emphasis on contemporary usage and practical application of vocabulary skills in the mastery of other subjects. Designed to increase and improve the student's word stock.

**880 (65) ENGLISH GRAMMAR (3).** Three lecture hours per week. Study of basic grammar, including such topics as sentence structure, diction, agreement, punctuation, and troublesome verbs.

## Ethnic Studies

**101 (1a) INTRODUCTION TO ETHNIC STUDIES I (3).** *Three lecture hours per week.* A study of the historical and cultural presence of Native Americans and La Raza in the United States, with special emphasis on their contributions to California's social, political and economic institutions. The roots of these groups studied from California and nationwide perspectives. Provides the student with a general background on two of California's oldest ethnic groups, and stimulates dialogue related to contemporary issues in California's institutional processes. (Satisfies State and Local Government Requirement.)

**102 (1b) INTRODUCTION TO ETHNIC STUDIES II (3).** *Three lecture hours per week.* A study of the historical and cultural presence of Blacks and Asians in the United States, with special emphasis on their contributions to California's social, political, and economic institutions. Their roots in California will be studied and compared from a national perspective. Provides the student with a general background on these two California groups and stimulates dialogue related to contemporary issues in California's institutional processes. (Satisfies State and Local Government Requirement.)

**150 (16) SOCIAL DYNAMICS OF PEOPLE OF COLOR (3).** *Three lecture hours per week.* Social structure and dynamics of Third World institutions, with emphasis upon development and effectiveness of these institutions among Third World communities in the United States. Concentrations include the family, education, religion and business. (Identical to Sociology 150.)

**151 (6a) PATTERNS OF PREJUDICE AND RACISM I (3).** *Three lecture hours per week.* Problems of prejudice and racism reviewed from a social-psychological perspective. Topics include how and when prejudiced attitudes are developed and their behavioral manifestations. Examples of sex, national, political, and racial prejudice and discrimination are presented. (Identical to Sociology 151.)

**152 (6b) PATTERNS OF PREJUDICE AND RACISM II (3).** *Three lecture hours per week.* Prejudice and racism analyzed according to international implications. Topics include imperialism, colonialism, nationalism, and genocide, with special concentration on contemporary issues such as those found in the Middle East, South Africa, Ireland. (Identical to Sociology 152.)

**160 (7) PSYCHOLOGY OF PEOPLE OF COLOR (3).** *Three lecture hours per week.* The development of psychological theories that provide viable alternative methods of analyzing the ideational and behavioral mechanisms operative among Third World persons. Exploration of methods of treatment of the major mental illnesses affecting each culture.

**261 (33a) AFRICAN-AMERICAN CULTURE I (3).** *Three lecture hours per week.* Discusses the relevance of African culture to the study of African-American life, including the African diaspora and its impact on contemporary African-American cultural institutions. (Identical to Social Science 261.)

**262 (33b) AFRICAN-AMERICAN CULTURE II (3).** *Three lecture hours per week.* Explores the emergence of modern Black social movements in the United States, their leaders and philosophies, and contemporary issues including the Black consciousness movement, Pan-Africanism, counter-cultural forms of expression, and social problems. (Identical to Social Science 262.)

**266 (43) BLACK LITERATURE (3).** *Three lecture hours per week.* Prerequisite: English 110, 120, 130, 140. Comprehensive survey of Afro-American letters in the United States from 1619 to the present. (Identical to Literature 266.)

**267 (15) AFRO-AMERICAN LANGUAGE (3).** *Three lecture hours per week.* Examination of the development of African-American language as a product of cultural contact. Linguistic roots of the language spoken by Black Americans. Innovative teaching methods for Black children and adults are utilized.

**270 (41) SURVEY OF BLACK MUSIC (3).** *Three lecture hours per week.* Chronological survey of the various styles and salient elements of the music of the Afro-American, encompassing sociological as well as musical factors. (Identical to Music 270.)

**275 (42) HISTORY OF JAZZ.** *Three lecture hours per week.* Study of all jazz since 1900, with emphasis on instrumental styles. The development of jazz since 1940 and contemporary trends. (Identical to Music 275.)

**288 (44) THE HISTORY OF BLACKS IN FILM (3).** *Three lecture hours per week.* Contributions of Blacks in the film industry and their historical relationship to the industry. Extensive use of films, supplemented by lecture and presentations by Black persons involved in the film industry.



**290 (20) CRIME AND THE BLACK COMMUNITY (3).** *Three lecture hours per week.* Explores nature and extent of crime among Blacks in the U.S. Seeks to understand crime, suggest methods of control, and predict criminality within the Black community. Topics covered: crimes against person, property, conviction rates among Blacks, and application of penal codes.

**300 (3) INTRODUCTION TO LA RAZA STUDIES (3).** *Three lecture hours per week.* Analysis of the origin, growth and development of mestizo peoples in the Americas. Introduction to the objectives, philosophies and history of the Chicano-Latino people and their cultural contributions to the United States. Examination of the dynamic and interpersonal dimensions of Chicanismo, utilizing lectures, films and group discussions.

**305 (5) INTRODUCTION TO NATIVE AMERICA (3).** *Three lecture hours per week.* Emphasizes the aspects of life, thought and culture that characterize the Native American and distinguish him from non-Indian cultures. Differences and similarities among various tribes are studied.

**310 (8) CULTURAL CONTRIBUTIONS OF BROWN AND RED PEOPLES (3).** *Three lecture hours per week.* Cultural contributions including art, drama, music, dance, and dress patterns intrinsic to the Brown and Red peoples. The significance of each of these art forms to American life and how they have affected the American scene. (Identical to Anthropology 310.)

**320 (11) LITERATURE AND LIFE OF BROWN AND RED AMERICANS (3).** *Three lecture hours per week.* Emphasizes the writer's contributions to the definition of American life and his/her attempt to articulate the anxieties, joys, frustrations, and sorrows of his people. Investigates his life in changing environment as described by his literary works.

**350 (12a) NATIVE AMERICAN WAY OF LIFE I (3).** *Three lecture hours per week.* Course concentrates on the teachings and writings of Carlos Castaneda, who presents the Yaqui way of life through an Old Yaqui Indian. Ancient Indian philosophies are taught and discussed, including views on the universe, nature, dignity, and self-esteem. First eight weeks concentrate on *The Teachings of Don Juan* and *A Separate Reality*. Second eight weeks use *Journey to Ixtlan* and *Tales of Power* as primary sources.

**351 (12b) NATIVE AMERICAN WAY OF LIFE II (3).** *Three lecture hours per week.* Prerequisite: *Ethnic Studies 350.* Course offers advanced study of ancient

ceremonial knowledge of the Brown and Red peoples of America. The material covered is comparable to advanced religions and philosophies of eastern Asiatic cultures, i.e. Zen Buddhism, Judeo-Christian, Hinduism. Focus on the concept of power and the modern pragmatic American mind as compared to the mystical reality of Native America.

**425 (4) THE HISTORY OF ASIAN PEOPLE IN THE UNITED STATES (3).** *Three lecture hours per week.* Asian-American history from 1840 to the present, with special attention to the contemporary issues and problems that are prevalent in Asian-American communities.

**435 (14) THE CHINESE IN THE UNITED STATES (3).** *Three lecture hours per week.* Socio-cultural history of the Chinese in America, their migration into urban areas, socialization, and role in American society from the 19th century to the present. Particular attention devoted to the transition of the Chinese family upon arrival in the United States.

**450 (25) JAPANESE-AMERICAN RELOCATION CAMPS (3).** *Three lecture hours per week.* An introduction to the Japanese-American internment experience during World War II. Anti-Japanese sentiment during the 1930's and its impact on West Coast Japanese. Topics to be explored include the rationale for removal, the evacuation process, life in the camps, generational conflicts, resistance to the camps, and the post-war impact of the camps.

**510 (17) AFRICAN LITERATURE (3).** *Three lecture hours per week.* Survey of works of contemporary African writers. An introduction course about the peoples and cultures of Africa through their literature, myths, legends, proverbs, and oral tradition as expressed by contemporary authors.

**520 (18) GOVERNMENTS AND POLITICS OF AFRICA (3).** *Three lecture hours per week.* An introduction to the study of the emergent African states, examining the political factors impinging on their decision-making processes and their geo-political consequences. A comparative analysis of non-Western institutional structures; differences in ideological orientation; and economic interdependence in the context of contemporary world politics. (Identical to Political Science 520.)

**585 (45) THIRD WORLD CINEMA (1). (Credit/No-credit.)** *Three lecture hours per week for six weeks.* An overview of the history of film by and about Third World peoples and their contributions to the develop-

ment of cinema. Focus on films by and about African people in various parts of the world.

**645 (46) SOCIAL INVESTIGATION & RESEARCH IN ETHNIC URBAN COMMUNITY ORGANIZATIONS (3).** *Two hours of lecture and three hours of supervised field work per week. Prerequisites: Six units of Ethnic Studies and/or Social Science courses.* Analysis of recent urban and social developments in San Mateo County communities. Theoretical and empirical dimensions of the urban ethnic experience. Participation in a selected community-based organization located in an urban institutional setting. A written report will mark completion of the project.

**680 (48) SELECTED TOPICS IN ETHNIC STUDIES (1-3).** *Hours by arrangement.* Selected topics in Ethnic Studies not covered by regular catalog offerings. Course content and unit credit to be determined by the Social Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN ETHNIC STUDIES (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Fire Science

**647 (47) COOPERATIVE EDUCATION (1-4) (Credit/No credit.)** Work experience in the field of fire protection and suppression, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (48) SELECTED TOPICS IN FIRE SCIENCE (1-3).** Selected topics in science not covered by regular catalog offerings. Course content and unit credit to be determined by the Health and Service Careers Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two

college-level courses in the subject field. (Note: Students normally receive credit for only one Special Project per semester.)

**700 (50) FIRE FIGHTING TACTICS (3).** *Three lecture hours per week.* Study of facts and probabilities, the firefighter's own situation, decision and plan of operation in combating a variety of emergency fire problems.

**705 (51a) FIRE SCIENCE HYDRAULICS (3).** *Three lecture hours per week.* Basic mathematics, principles of hydraulics, calculations of engine and nozzle pressures, discharge, fire streams, friction loss and pump operation and characteristics. Application of formulas to hydraulics and water supply problems.

**710 (53) COMPANY ADMINISTRATION (3).** *Three lecture hours per week.* Introduction to fire service organization, with emphasis on company officers in relation to planning, responsibility, organizing and supervision necessary to meet the needs of the fire service agency.

**712 (54) PERSONNEL ADMINISTRATION (3).** *Three lecture hours per week.* Organization and administration of fire service personnel; analysis, classification and description of jobs; incentives; evaluation; placement activities; training, safety, medical, grievances, discipline and employee benefits.

**715 (55) FIRE PROTECTION AND SUPPRESSION (3).** *Three lecture hours per week.* The philosophy and history of fire protection, characteristics and behavior of fire, fire extinguishing agents, and fire protection organization and associated equipment. A brief introduction to the Insurance Service Offices Grading Schedule and its relation to insurance rates.

**720 (56) FUNDAMENTALS OF FIRE PREVENTION (3).** *Three lecture hours per week.* Fundamentals of fire prevention techniques, procedures, regulation and enforcement; discussions of hazards in ordinary and special occupancies; organization and functions of fire prevention bureaus.

**725 (61) FIRE DEPARTMENT APPARATUS AND EQUIPMENT (3).** *Three lecture hours per week.* Operation, care and maintenance, specifications, capabilities and effective utilization of fire service apparatus and related equipment.

**731-732 (62a-62b) HAZARDOUS MATERIALS I AND II (3-3).** *Three lecture hours per week.*

150 *Description of Courses (continued)*

**731 (62a)** — An introduction to the basic fire chemistry and physics. Problems of flammability as encountered by firefighters when dealing with fuels and oxidizers. Elementary fire fighting practices pertaining to hazardous materials in storage and transit.

**732 (62b)** — Handling, identification and fire fighting practices involving explosive, toxic and radioactive materials in storage and transit.

**740 (63) BUILDING CONSTRUCTION FOR FIRE PROTECTION (3).** *Three lecture hours per week.* Fundamentals of building construction as it relates to fire protection, with emphasis on code requirements, utilization of building materials and their fire resistive qualities.

**745 (64) FIRE PROTECTION EQUIPMENT AND SYSTEMS (3).** *Three lecture hours per week.* A study of water supply systems, portable and fixed fire extinguishing equipment, sprinkler systems, protection systems for special hazards, and fire detection and alarm systems.

**750 (65) RELATED CODES AND ORDINANCES (3).** *Three lecture hours per week.* Familiarization and interpretation of national, state, and local laws and ordinances which influence the field of fire prevention and safety.

**755 (66) RESCUE PRACTICES (3).** *Three lecture hours per week.* Fundamentals of rescue practices, use of emergency tools and equipment, vehicle extrication, emergency care of accident victims, cardiopulmonary resuscitation, and emergency first aid.

**760 (67) FIRE INVESTIGATION (3).** *Three lecture hours per week.* Introduction to arson and incendiarism, arson laws and types of incendiary fires, methods of determining fire cause, recognizing and preserving evidence, interviewing and detaining witnesses; procedures in handling juveniles; court procedure and giving court testimony.

**771 (68a) FIRE SERVICE TRAINING I (3).** *Three lecture hours per week. Prerequisites: F.S. 710, 712, 715.* Designed for fire company officers who conduct in-service training programs. Identification of training needs, use of occupational analysis, identifying course objectives and content, establishing levels of instruction, constructing student performance goals, constructing manipulative lesson plans, preparing supplementary instruction sheets, and teaching manipulative skills.

**772 (68b) FIRE SERVICE TRAINING II (3).** *Three lecture hours per week.* Fundamentals of establishing levels of technical instruction, constructing student performance goals, constructing technical lesson plans, teaching technical subjects, and use of visual teaching aids.

**781 (70a) BASIC FIRE ACADEMY I (5).** *Four lecture and three lab hours per week.* Designed for pre-service instruction in fire service organizations, fire control, equipment operations and procedures, extinguishers and protective equipment, care and use of hose, nozzles and fittings.

**782 (70b) BASIC FIRE ACADEMY II (5).** *Four lecture and three lab hours per week. Prerequisites: F.S. 781.* Lecture and manipulative instruction in basic and advanced hose evolutions, fire service ladders, salvage and overhaul procedures and emergency medical care.

## Foreign Language

Students who expect to transfer to a four-year institution are strongly advised to study a foreign language at the college. Please see individual listing for offerings in French, German and Spanish.

## French

**Language Laboratory and Listening Requirement** — Students enrolled in certain courses in foreign language are required to make use of the language laboratory as prescribed by each department. Imitation, response and independent practice are integral features of the study of a foreign language at the college.

**110 (1) ELEMENTARY FRENCH (5).** *Five lecture hours and two lab hours per week.* Conversation in the language, dictation, reading, study of the fundamentals of grammar and the writing of simple French exercises.

**111 (1a) ELEMENTARY FRENCH I (3).** *May be offered either for eight weeks on a daily basis plus two lab hours, or in a semester-long program for three lecture hours and one lab hour per week.* Approximately half of the semester's work in French 110 is covered in this course.

**112 (1b) ELEMENTARY FRENCH II (3).** *May be offered either for eight weeks on a daily basis plus two lab hours, beginning at mid-term, or in a semester-long program for three lecture hours and one lab hour per week. Prerequisite: French 111 or equivalent.* Ap-

proximately the second half of the semester's work in French 110 is covered. French 111 and 112 are equivalent to French 110.

**120 (2) ADVANCED ELEMENTARY FRENCH (5).** Five lecture hours and two lab hours per week. Prerequisite: Completion of French 110 or French 112, with a passing grade, or assignment by the Foreign Language Department on the basis of the Foreign Language Placement Test in French. Conversation, dictation, further study of grammar and sentence structure; study of cognates, derivatives and idioms, reading of short studies.

**121 (2a) ADVANCED ELEMENTARY FRENCH I (3).** May be offered either for eight weeks on a daily basis plus two lab hours, or in a semester-long program for three lecture hours and one lab hour per week. Prerequisite: French 110 or 112. Approximately the first half of the semester's work in French 120 is covered.

**122 (2b) ADVANCED ELEMENTARY FRENCH II (3).** May be offered either for eight weeks on a daily basis plus two lab hours, beginning at mid-term, or in a semester-long program for three lecture hours and one lab hour per week. Prerequisite: French 121 or equivalent. Approximately the second half of the semester's work in French 120 is covered. French 121 and 122 are equivalent to French 120.

**130 (3) INTERMEDIATE FRENCH (5).** Five lecture hours and one lab hour per week. Prerequisite: Completion of French 110 and 120 with a passing grade, or assignment by the Foreign Language Department on the basis of the Foreign Language Placement Test in French. Concurrent enrollment in French 201 is recommended. Reading of short stories, plays or novels; review of grammar, conversation, composition, dictation.

**131 (3a) INTERMEDIATE FRENCH I (3).** May be offered either for eight weeks on a daily basis plus one lab hour, or in a semester-long program for three lecture hours and one-half hour lab per week. Prerequisite: French 120 or 122. Approximately the first half of the semester's work in French 130 is covered.

**132 (3b) INTERMEDIATE FRENCH II (3).** May be offered either for eight weeks on a daily basis plus one lab hour, beginning at mid-term, or in a semester-long program for three lecture hours and one-half hour lab per week. Prerequisite: French 131 or equivalent. Approximately the second half of the semester's work in French 130 is covered. French 131 and French 132 are equivalent to French 130.

**140 (4) ADVANCED INTERMEDIATE FRENCH (3).** Three lecture hours and one lab hour per week. Prerequisite: Completion of French 130 with a passing grade, or assignment by the Foreign Language Department on the basis of the Foreign Language Placement Test in French. Concurrent enrollment in French 201 or 202 recommended. Reading of selections from French literature and reading of a contemporary novel; further practice of conversation and composition; continued review of principles of grammar; analysis of idioms.

**161 (25a) READING IN FRENCH LITERATURE I (3).** Three lecture hours and two lab hours per week, or one hour recording and one hour outside reading. Prerequisite: Completion of French 140 with a passing grade, or assignment by the Foreign Language Department on the basis of the Foreign Language Placement Test in French. Concurrent enrollment in French 202 recommended. Reading and discussion of works of French literature. Continued review of principles of grammar.

**162 (25b) READING IN FRENCH LITERATURE II (3).** Three lecture hours and two lab hours per week, or one hour recording and one hour outside reading. Prerequisite: French 161. Further reading and discussion of works of French literature. Continued review of principles of grammar.

**201 (8a) FRENCH CONVERSATION I (2).** Two lecture hours and one lab hour per week. Prerequisite: French 130 or French 140, or concurrent enrollment in French 130 or equivalent. (Native speakers not eligible.) Practice in conversation based on French customs and culture. (May be repeated for credit.) (Fall only.)

**202 (8b) FRENCH CONVERSATION II (2).** Two lecture hours and one lab hour per week. Prerequisite: French 201 or French 140 or 161, or equivalent. (Native speakers not eligible.) Further practice in conversation based on French customs and culture. (May be repeated for credit.) (Spring only.)

**620 (30) INDIVIDUAL READING IN FRENCH (1-2).** Conference periods for oral reports. Time to be arranged. A minimum of three hours of reading per unit of credit is required weekly. Prerequisites: Current enrollment in or completion of French 162. Reading of French classics, contemporary literature or recent periodicals. (May be repeated for credit.)

**680 (48) SELECTED TOPICS IN FRENCH (1-3).** Hours by arrangement. Selected topics in French not covered by regular catalog offering. Course content and unit

credit to be determined by the Director of the Language Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in specific field or topic, directed by an instructor and supervised by the Language Arts Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**801 (100a) CONVERSATIONAL FRENCH I, ELEMENTARY (2).** (Credit/No credit.) *Three lecture hours per week.* A practical course in the French language approach by way of conversation. Intensive drill in the patterns and idioms of daily speech is supported with sufficient grammar to give flexibility in the spoken language. May be considered an excellent preparatory course for students who have not taken a foreign language before. (This course will not fulfill language requirements at California State Colleges or at the University of California.) (May be repeated for credit.)

When student demand is light, French 802, 803 and 804 may be offered as 1.5 hour modules.

**802 (100b) CONVERSATIONAL FRENCH II, ADVANCED ELEMENTARY (2).** (Credit/No credit.) *Three lecture hours per week. Prerequisite: French 801 or equivalent.* Further work in conversation following the model of French 801. (This course will not fulfill language requirements at California State Colleges or at the University of California.)

**803 (100c) CONVERSATIONAL FRENCH III, INTERMEDIATE (2).** (Credit/No credit.) *Three lecture hours per week. Prerequisite: French 802 or equivalent.* More advanced work in conversation following the model of French 802. (This course will not fulfill language requirements at California State Colleges or at the University of California.) (May be repeated for credit.)

**804 (100d) CONVERSATION FRENCH IV, ADVANCED INTERMEDIATE (2).** (Credit/No credit.) *Three lecture hours per week. Prerequisite: French 803 or equivalent.* Further advanced work in conversation following the model of French 803. (This course will not fulfill language requirements at California State Colleges or at the University of California.) (May be repeated for credit.)

## Geography

**100 (1a) PHYSICAL GEOGRAPHY (3).** *Three lecture hours per week plus field trips.* Basic characteristics of physical features and their interrelationships; environmental systems and their interactions with man. Maps, photos, and the regional concept are the primary tools for this study. (Satisfies the General Education requirement for Physical Science.)

**110 (1b) CULTURAL GEOGRAPHY (3).** *Three lecture hours per week.* Aerial distribution of the most important parts of man's culture. Emphasis on the way he makes a living; the origin and development of man, population distribution and settlement patterns. (Satisfies Social Science requirement in part.)

**120 (4) ECONOMIC GEOGRAPHY (3).** *Three lecture hours per week.* Investigation and description of basic resources, and the effects of different cultural and physical environments upon the utilization of these resources. Products of various agricultural areas of the world, mineral resources, industry, transportation, communication and power production.

**150 (6) WORLD REGIONAL GEOGRAPHY (3).** *Three lecture hours per week.* World landscapes and how they have changed under the impact of population, technological and social changes, and the physical, cultural and economic patterns that have developed. An overview of material covered in Geog. 160 and 170.

**160 (5a) WORLD REGIONAL GEOGRAPHY I (3).** *Three lecture hours per week.* North and South American landscapes and how they have changed under the impact of population, technological and social changes; resulting problems and physical, historical and economic patterns.

**170 (5b) WORLD REGIONAL GEOGRAPHY II (3).** *Three lecture hours per week.* European, Asian and African landscapes and how they have changed under the impact of population, technological and social change; resulting problems and physical, historical and economic patterns.

**680 (48) SELECTED TOPICS IN GEOGRAPHY (1-3).** *Hours by arrangement.* Selected topics in Geography not covered by regular catalog offerings. Course content and unit credit to be determined by the Social Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN GEOGRAPHY (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally receive credit for only one Special Project per semester.)

**800 (99) HISTORICAL GEOGRAPHY (3).** Three lecture hours per week. Analysis of selected problems from the historical geography of the United States. Emphasis on small discussion groups. Extensive use of audio-visual materials. (Fulfills American Institutions requirement for students working toward the Associate in Arts degree.) (Identical to History 800.)

## Geology

**100 (10) SURVEY OF GEOLOGY (3).** Day: Two lecture and one recitation hour per week plus two field trips. Evening: Two lecture and one recitation hour per week plus two Saturday field trips. Not open to students who have taken or are taking Geology 210. Basic principles of igneous, sedimentary and metamorphic geology. Lectures on rocks, minerals and the origin of the earth, continents and mountains. A brief sketch of the geological history of the earth and the evolution of its animal and plant inhabitants.

**130 (6) ELEMENTARY MINERALOGY (4).** Two lecture and six lab hours per week, plus one four-day field trip, two one-day field trips and one half-day field trip. Recommended: Elementary Chemistry. Basic principles of crystallography, crystal chemistry and mineral formation. Laboratory includes mineral and rock identification, plus work on crystal models and the crystal projections. (Offered alternate spring semesters.)

**210 (1a) GENERAL GEOLOGY (4).** Three lecture and three lab hours per week plus two field trips. An introduction to the nature and structure of the materials composing the earth and of the various processes which shape the earth's surface.

**220 (1b) HISTORICAL GEOLOGY (4).** Three lecture hours and three lab hours per week, plus one weekend field trip and one day-long field trip. Prerequisite: Geology 210 or Geology 100. Geological history of the earth and the evolution of its animal and plant inhabitants.

**680 (48) SELECTED TOPICS IN GEOLOGY (1-3).** Hours by arrangement. Selected topics in Geology not covered by regular catalog offerings. Course content and unit credit to be determined by the Math/Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two collegelevel courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## German

**Language Laboratory and Listening Requirement** — Students enrolled in certain courses in foreign language are required to make use of the language laboratory as prescribed by each department. Imitation, response and independent practice are integral features of the study of a foreign language at the College.

**110 (1) ELEMENTARY GERMAN (5).** Five lecture hours and 2 lab hours per week. Study and practice (both oral and written) of basic forms and patterns of German, development of a satisfactory pronunciation, the learning and using of vocabulary of high frequency and the reading of simple German text. The student is required to make extensive use of the listening facilities in the College library and of the language laboratory.

**111 (1a) ELEMENTARY GERMAN I (3).** May be offered either for eight weeks on a daily basis plus two lab hours, or in a semester-long program for three lecture hours and one lab hour per week. Approximately half of the semester's work in German 110 covered in this course. Recommended for those students without any background in foreign language study.

**112 (1b) ELEMENTARY GERMAN III (3).** May be offered either for eight weeks on a daily basis plus two lab hours, beginning at mid-term, or in a semester-long program for three lecture hours and one lab hour per week. Prerequisite: German 111 or equivalent. Approximately the second half of the semester's work in German 110 is covered. German 111 and 112 are equivalent to German 110.



**120 (2) ADVANCED ELEMENTARY GERMAN (5).** Five lecture hours and two lab hours per week. Prerequisite: German 110 with a passing grade, or completion of German 112 with a passing grade; or assignment by the Foreign Language Department on the basis of the Foreign Language Placement Test in German. Continuation of work begun in German 110 with continued practice in listening, speaking, reading (of more difficult textual material) and writing. (See "Language Laboratory Requirement" above.)

**121 (2a) ADVANCED ELEMENTARY GERMAN I (3).** May be offered either for eight weeks on a daily basis plus two lab hours, or in a semester-long program for three lecture hours and one lab hour per week. Prerequisite: German 110 or 112. Approximately the first half of the semester's work in German 120 is covered.

**122 (2b) ADVANCED ELEMENTARY GERMAN II (3).** May be offered either for eight weeks on a daily basis plus two lab hours, beginning at mid-term, or in a semester-long program for three lecture hours and one lab hour per week. Prerequisite: German 121 or equivalent. Approximately the second half of the semester's work in German 120 is covered. German 121 and 122 are equivalent to German 120.

**130 (3) INTERMEDIATE GERMAN (5).** Five lecture hours and one lab hour per week. Prerequisite: German 120 with a passing grade, or assignment by the Foreign Language Department on the basis of the Foreign Language Placement Test in German. Reading of modern writers, advanced grammar and syntax; study of idioms; study of vocabulary through cognates, derivatives and word building.

**131 (3a) INTERMEDIATE GERMAN I (3).** May be offered either for eight weeks on a daily basis plus two lab hours, or in a semester-long program for three lecture hours and one lab hour per week. Prerequisite: German 120 or 122. Approximately the first half of the semester's work in German 130 is covered.

**132 (3b) INTERMEDIATE GERMAN II (3).** May be offered either for eight weeks on a daily basis plus two lab hours, beginning at mid-term, or in a semester-long program for three lecture hours and one lab hour per week. Prerequisite: German 131 or equivalent. Approximately the second half of the semester's work in German 130 is covered. German 131 and 132 are equivalent to German 130.

**140 (4) ADVANCED INTERMEDIATE GERMAN (3).** Three lecture hours and one lab hour per week. Prerequisite: German 130 with a passing grade, or assign-

ment by the Foreign Language Department on the basis of the Foreign Language Placement Test in German. More time and attention are devoted to reading; texts are by German authors, beginning with Goethe to recent times. Study of word families, derivatives, compounds, idioms; practice of patterns; aural practice.

**161 (25a) READINGS IN GERMAN LITERATURE I (3).** Three lecture hours per week. Prerequisite: German 140. Oral and written composition, class reading of works of German literature, extensive collateral reading of varied types of German literature and study of a review of grammar. (May be repeated for credit.)

**162 (25b) READINGS IN GERMAN LITERATURE II (3).** Three lecture hours per week. Prerequisite: German 161. Continuation of oral and written composition, class reading of works of German literature, extensive collateral reading of varied types of German literature and study of a review of grammar. (May be repeated for credit.)

**201 (8a) GERMAN CONVERSATION I (2).** Two lecture hours and one lab hour per week. Prerequisite: Successful completion of two semesters of college-level work in German. Native speakers not eligible. Conversation based upon German customs, manners, mores, history, newspapers, periodicals, plays and short stories. (May be repeated for credit.)

**202 (8b) GERMAN CONVERSATION II (2).** Two lecture hours and one lab hour per week. Prerequisite: Successful completion of three semesters of college-level work in German. Native speakers not eligible. Further conversation based upon German customs, manners, mores, history, newspapers, periodicals, plays and short stories. (May be repeated for credit.)

**620 (30) INDIVIDUAL READINGS—GERMAN (1-2).** One conference period per week or oral report. Prerequisite: Evaluation of previous preparation, usually at least German 140. Minimum requirements: 54 hours of reading for each unit granted. Credits are based on the reading accomplished by each student. Modern books or recent periodicals. The student's preference determines largely the choice of the reading material. (May be repeated for credit.)

**680 (48) SELECTED TOPICS IN GERMAN (1-3).** Hours by arrangement. Selected topics in German not covered by regular catalog offerings. Course content and unit credit to be determined by the Director of the Language Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**801 (100a) CONVERSATIONAL GERMAN I, ELEMENTARY (2).** **(Credit/No credit.)** *Three lecture hours per week.* A practical course in the German language approached by way of conversation. Intensive drill in the patterns and idioms of daily speech is supported with sufficient grammar to give flexibility in the spoken language. May be considered an excellent preparatory course for students who have not taken a foreign language before. (This course will not fulfill language requirement at California State Colleges or at the University of California.) (May be repeated for credit.)

When student demand is light, German 802, 803 and 804 may be offered as 1.5 hour modules.

**802 (100b) CONVERSATIONAL GERMAN II, ADVANCED ELEMENTARY (2).** **(Credit/No credit.)** *Three lecture hours per week. Prerequisite: German 801 or equivalent.* Further work in conversation following the model of German 801. (This course will not fulfill language requirement at California State Colleges or at the University of California.) (May be repeated for credit.)

**803 (100c) CONVERSATIONAL GERMAN III, INTERMEDIATE (2).** **(Credit/No credit.)** *Three lecture hours per week. Prerequisite: German 802 or equivalent.* More advanced work in German following the model of German 801. (This course will not fulfill language requirement at California State Colleges or at the University of California.) (May be repeated for credit.)

**804 (100d) CONVERSATIONAL GERMAN IV, ADVANCED INTERMEDIATE (2).** **(Credit/No credit.)** *Three lecture hours per week. Prerequisite: German 803 or equivalent.* Further advanced work in conversation following the model of German 803. (This course will not fulfill requirement at California State Colleges or at the University of California.) (May be repeated for credit.)

## Guidance

(See Career and Personal Development and Tutoring.)

## Health Science

**100 (1) GENERAL HEALTH SCIENCE (2).** *Two lecture hours per week. Health Science 100 or equivalent required for A.A. degree (minimum 2 units.) Two units of Health Science 101-112 are equivalent to Health Science 100.* A survey of today's most prevalent health problems, including such topics as heart disease, cancer, venereal disease, birth control, drug abuse, and emotional disorders. Discussions focus primarily on prevention, detection, and treatment of personal health problems and their social implications (This course satisfies the California teaching credential requirement.)

**101 (2f) HEREDITY AND BIRTH DEFECTS (1).** *Two lecture hours per week for eight weeks. (Two units of Health Science 101-112 are equivalent to Health Science 100.)* Study of the principles of human genetics and prenatal development, with an overview of many severe hereditary and environment-induced defects.

**102 (2a) HUMAN REPRODUCTION (1).** *Two lecture hours per week for eight weeks. (Two units of Health Science 101-112 are equivalent to Health Science 100.)* Overview of the reproductive processes of life forms, with emphasis on the biological aspects of human reproduction and birth control. Designed to provide a factual basis for an understanding of the emotional and behavioral aspects of sex. (This course partially satisfies the California teaching credential requirement.)

**103 (2e) DRUGS AND ALCOHOL (1).** *Two lecture hours per week for eight weeks. (Two units of Health Science 101-112 are equivalent to Health Science 100.)* Study of the general categories of drugs; discussion of the beneficial and harmful effects that various and specific drugs have upon the individual and society. (This course partially satisfies the California teaching credential requirement.)

**104 (2b) NUTRITION AND FITNESS (1).** *Two lecture hours per week for eight weeks. (Two units of Health Science 101-112 are equivalent to Health Science 100.)* Principles of nutrition and exercise as contributing factors to total fitness. Provides tools for the student to analyze his/her diet and effect positive changes in eating habits and physical activities to improve mental and physical well-being.

**105 (2c) COMMUNICABLE DISEASE (1).** *Two lecture hours per week for eight weeks. (Two units of Health Science 101-112 are equivalent to Health Science 100.)* Study of some of the most prevalent and debilitating

communicable diseases: causes, social implications, methods of detection, treatment and prevention.

**106 (2g) EMOTIONAL HEALTH (1).** *Two lecture hours per week for eight weeks. (Two units of Health Science 101-112 are equivalent to Health Science 100.)* Concepts of personality development, emotional health and emotional disorders, with emphasis on the positive aspects of developing and maintaining emotional stability.

**109 (2d) ENVIRONMENTAL HEALTH (1).** *Two lecture hours per week for eight weeks. (Two units of Health Science 101-112 are equivalent to Health Science 100.)* Principles of ecology and critical appraisal of man's effect on the environment. Discussion of several types of environmental hazards and pollutants, with emphasis on how they affect man's health.

**111 (2h) HEART DISEASE AND CANCER (1).** *Two lecture hours per week for eight weeks. (Two units of Health Science 101-112 are equivalent to Health Science 100.)* Study of the two leading causes of death in the U.S. today, taking into account their causes, danger signals, methods of prevention, detection and treatment.

**112 (2i) CURRENT HEALTH ISSUES (1).** *Two lecture hours per week for eight weeks. (Two units of Health Science 101-112 are equivalent to Health Science 100.)* An objective look at the medical, legal, and ethical aspects of the most provocative, controversial health issues making today's news headlines.

**160 (11) HOLISTIC HEALTH (2).** *Two lecture hours per week.* A practical survey course designed to elevate the student's personal awareness of those forces within and around him which variously enhance or undermine the experience of well-being. Includes direct experience of a variety of health-promoting techniques (yoga, massage, breathing exercises, visualization, etc.) as well as information regarding such healing practices as acupuncture, biofeedback and chiropractic. (Will satisfy 1 unit of the Health Science General Education requirement for an A.A. degree.)

**310 (9) NUTRITION: HEALTH/DISEASE (3).** *Three lecture hours per week.* Basic concepts of nutrition and their relationship to health of people of all ages, with application to the selection of foods to meet nutritional needs of the individual. (This course is identical to Home Economics 310, and may be used to waive Health Science 104.)

**644 (47) COOPERATIVE EDUCATION (1-4). (Credit/No credit).** Work experience in a field related to a ca-

reer goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133).

**680 (48) SELECTED TOPICS IN HEALTH SCIENCE (1-3)** *Hours by arrangement.* Selected topics in Health Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Math/Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## History

(See Also Humanities)

**100 (4a) HISTORY OF WESTERN CIVILIZATION I (3).** *Three lecture hours per week.* The rise and decline of the civilization of the ancient world, the rise of Christianity, the growth and decline of Medieval society, the Renaissance, the Reformation and the opening of the modern world. (Hist. 100-102 (6 units) fulfills American Institutions requirement.)

**101 (4b) HISTORY OF WESTERN CIVILIZATION II (3).** *Three lecture hours per week.* The rise of modern Europe: The Enlightenment, the French Revolution and the growth of Liberalism. The emergence of modern society; economic problems of industrialization, development of modern ideologies, and the World Wars and international experiments of the 20th century. (History 100-102 (six units) fulfills American Institutions requirement.)

**102 (4c) HISTORY OF AMERICAN CIVILIZATION (3).** *Three lecture hours per week.* The colonial settlement of North America, the Enlightenment, the age of revolution and the growth of democracy, the problems of industrialization, the emergence of modern society, the effects of the expansion of the 19th and 20th centuries upon the culture of America, and the role of the United States in the modern world. (History 100-102 (six units) fulfills American Institutions requirements.)

**110 (5) HISTORY OF ENGLAND (3).** *Three lecture hours per week.* A survey course, including in its scope the more important political, constitutional, economic, social and cultural phases of the history of the English people.

**130 (12) ECONOMIC HISTORY OF EUROPE (3).** *Three lecture hours per week.* The roots of modern economic society traced to its European origins. The rise of mercantilism, the market system, and modern industrialism sketched against the ancient and medieval background. Attention given to 20th century interwar and postwar developments, including recent movements toward European economic union. (Identical to Economics 130.)

**141 (20a) TWENTIETH CENTURY EUROPE I (3).** *Three lecture hours per week.* History after 1870, the year of the unification of Germany and Italy, and the events which ushered in the present period of European history. Covers social and intellectual, as well as political and military affairs, through World War I to the settlements of 1919.

**142 (20b) TWENTIETH CENTURY EUROPE II (3).** *Three lecture hours per week.* History of Europe after the first World War. The brief optimism of the 1920s, followed by the Depression and the period after World War II.

**150 (46) HISTORY OF MODERN GERMANY (3).** *Three lecture hours per week.* Impact of the French Revolution and the Napoleonic Wars on Germany; The German Confederation; liberalism and nationalism; the Revolutions of 1848; Bismarck and German unification; the German Empire; William II and the First World War; the Weimar Republic; the Nazi era; World War II and Nazi collapse; the two Germanies; German character and historical heritage.

**160 (45) HISTORY OF MODERN RUSSIA (3).** *Three lecture hours per week.* Careful analysis of the development of Russia from a loose federation of city-states into an autocratic nation and a modern Soviet state; study of the political, economic and cultural development of 20th century Russia.

**201 (17a) UNITED STATES HISTORY I (3).** *Three lecture hours per week.* A survey of English colonization along the Atlantic Coast, the westward expansion of the colonists, the Revolution, the formation of the Constitution, the Federalist and Jeffersonian systems, the reign of Andrew Jackson, the slavery issue and Civil War. Economic, political, social and cultural developments of the period are included. (Hist. 201-202 (6 units) fulfills American Institutions Requirement.)

**202 (17b) UNITED STATES HISTORY II (3).** *Three lecture hours per week.* Continues the work of Hist. 201; explores the reconstruction period, industrial expansion, social and economic development, and the foreign policies of the U.S. to the present. (History 201-202 (6 units) fulfills American Institutions requirement.)

**210 (26) 20th CENTURY AMERICAN HISTORY (3).** *Three lecture hours per week.* Major economic, political, social and intellectual developments of the United States since the 1920's. (With History 201 or 202, fulfills American Institutions requirement.)

**230 (11) ECONOMIC HISTORY OF THE UNITED STATES.** *Three lecture hours per week.* Origin and development of the American economy from colonial times to the present. Includes the basis for industrial growth, land and resource use, the transportation revolution, the development of money and banking machinery, changing trade patterns, the rise of organized labor, the economic role of government. (Identical to Economics 230; with History 201 or 202, fulfills American Institutions requirement.)

**242 (33) THE AFRO-AMERICAN IN U.S. HISTORY (3).** *Three lecture hours per week. Recommended: History 201.* Social, economic and political facts as they relate to the Afro-American. Race relations are analyzed, with special emphasis on the history of the Afro-American. (With History 201 or 202, fulfills American Institutions requirement.)

**260 (28) WOMEN IN AMERICAN HISTORY (3).** *Three lecture hours per week.* A survey of the role played by American women from Colonial times to the present. The part played by American women of different racial and local origins is explored in depth. Attitudes of women, as well as attitudes about women in America. (With History 201 or 202, fulfills American Institutions requirement.)

**270 (35) CIVIL WAR AND RECONSTRUCTION (3).** *Three lecture hours per week. Recommended: History 201 or 202.* Survey and analysis of the political, social and economic problems of the North and South during the ante-bellum, Civil War and Reconstruction eras. (With History 201 or 202, fulfills American Institutions requirement.)

**280 (24) AMERICAN FOREIGN POLICY (3).** *Three lecture hours per week.* Historical inquiry into the background of major problems in foreign policy of our day. Special attention given to the period since World War II. (With History 201 or 202, fulfills American Institutions requirement.)

**290 (30) THE AMERICAN LABOR MOVEMENT (3).** *Three lecture hours per week.* A survey of the history, structure, and institutions of the organized labor movement in the United States, covering developments from the colonial era to the present, with the greatest emphasis on trends since the Civil War. Particular attention paid to labor's role in California and the Bay Area. (Identical to Labor Studies 290; With History 201 or 202, fulfills American Institutions requirement.)

**310 (22) CALIFORNIA HISTORY (3).** *Three lecture hours per week.* A survey of major trends in California's rapid growth, including the Indian culture; discovery and Spanish colonization; the mission-ranchero era; the American take-over; the Gold Rush and the vigilante eras; the constitutional; political, and economic growth of the State; and contemporary social and economic problems as the most populous state in the Union. (Satisfies the requirement in California State and Local Government.)

**315 (21) HISTORY OF SAN MATEO COUNTY (3).** *Three lecture hours per week.* Survey of the County's development to the present. The natural setting; discovery and exploration; mission-rancho era; establishment of county government; pioneers; advent of railroads; lumbering; industry; growth of Bayside and Coastside communities; airport; industrial parks; population shifts and voting trends. (Satisfies the requirement in California State and Local Government.)

**350 (25) THE AMERICAN WEST (3).** *Three lecture hours per week.* The movement of Americans west of the Mississippi River, with an emphasis on fur trading, cattle raising, farming, mining, railroad buildings, and community building. Indian problems, and the character and image of the West and Westerners. (With History 201 or 202, fulfills American Institutions requirement.)

**360 (32) THE SOUTH IN AMERICAN HISTORY (3).** *Three lecture hours per week.* A survey course designed to acquaint the student with the 15 former slave states. Introduces the student to history from the Colonial period through the National period: the Civil War and Reconstruction; Populism and the "New South"; the 20th century; Southern industrialization; the New Deal; the revolution of the Civil Rights Movement; and the election of Jimmy Carter. (With History 201 or 202, fulfills American Institutions requirement.)

**401 (6a) AFRICAN CIVILIZATIONS I (3).** *Three lecture hours per week.* The period prior to 1800—the sources of African history, Africa in ancient times, the spread of Islam, the era of empires and city-states, Af-

ADMISSIONS AND REGISTRATION  
COLLEGE OF SAN MATEO  
1700 W. HILLSDALE BLVD.  
SAN MATEO, CALIFORNIA 94402

rica and the first period of European expansion, kingdoms and the Savannah and forest, coastal tropical Africa and the Atlantic world.

**402 (6b) AFRICAN CIVILIZATIONS II (3).** *Three lecture hours per week.* The period after 1800—African civilizations and cultures, political reorganizations, developments in Northern Africa, Nineteenth Century jihads, interaction of Africa and Europe, the European scramble for Africa and its partitioning, consolidation of colonial control, and the rise of African nationalism.

**421 (8a) HISTORY OF THE AMERICAS (3).** *Three lecture hours per week.* General survey of the history of North and South America, from the time of the pre-Columbian Indian civilizations, through the European conquests, to the ages of the revolutions against the European colonizing powers.

**422 (8b) MODERN LATIN AMERICA (3).** *Three lecture hours per week.* General survey of the history of North and South America, from about 1830 to the present. Emphasis on the larger countries of the Western Hemisphere, and the development during the crucial period which began with the outbreak of World War II and has continued until contemporary times.

**450 (44) HISTORY OF THE FAR EAST (3).** *Three lecture hours per week.* Introductory survey of the political, social and economic history of the countries of the Far East. The response of Asia to the impact of the western world. An analysis of contemporary trends and problems with particular reference to China and Japan. The historical developments of India, Pakistan and the countries of Southeast Asia.

**680 (48) SELECTED TOPICS IN HISTORY (1-3).** *Hours by arrangement.* Selected topics in History not covered by regular catalog offerings. Course content and unit credit to be determined by the Social Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN HISTORY (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**800 (99) HISTORICAL GEOGRAPHY (3).** *Three lecture hours per week.* Analysis of selected problems from the historical geography of the United States. Emphasis on small discussion groups. Extensive use of audio-visual materials. (Fulfills American Institutions requirement for students working toward the Associate in Arts degree.) (Identical to Geography 800.)

**810 (50) AMERICAN HISTORY AND WORLD AFFAIRS (3).** *Three lecture hours per week.* A study of current issues, events and institutional changes in the United States through the analysis of their geographic and historical context, and their relation to events and people at home and abroad. Lecture, films, library, and small discussion groups. (Fulfills American Institutions requirements for students working toward the Associate in Arts degree and not planning to transfer to a four-year institution.) May be repeated for credit.

## Home Economics

(Formerly Consumer Arts and Sciences)

**110 (CA&S 20) BEGINNING FASHION CONSTRUCTION (3).** *Two lecture and three lab hours per week.* Selection and alteration of patterns form individual figure problems; fabric preparation and care properties, with emphasis on construction techniques for fabrics found in yardage stores.

**113 (CA&S 22) TEXTILES (3).** *Three lecture hours per week.* Study of natural and chemical fibers; yarns and fabric construction and finishes. Care, cost and labeling as related to consumer use.

**116 (CA&S 21) ADVANCED CONSTRUCTION TAILORING (3).** *Two lecture and three lab hours per week.* The use of custom details, couturier and tailoring techniques in construction of high quality clothing. Consideration also given to organization and speed techniques.

**117 (CA&S 24) FASHION IMAGE (2).** *Two lecture hours per week.* Analysis of figure types and problems, coordination of fashionable styles, colors, textures and accessories; individualized assistance for developing a creative wardrobe on a budget.

**118 (CA&S 26) FASHION DESIGN (3).** *Two lecture and three lab hours per week.* The construction and use of flat pattern as a method of creating a design for the individual with consideration to fabric performance.

**151 (CA&S 18) FASHION MERCHANDISING (3).** *Three lecture hours per week.* Structure of ready-to-wear apparel industry, including the functions and policies of the various types of retail stores as they relate to the promotion of fashion merchandising; consideration of the various factors which affect the merchandising of fashion apparel. (Identical to Business 151.)

**152 (17) FASHION DISPLAY (3).** *Two lecture and three lab hours per week.* Study of the elements of fashion which make for success in fashion, merchandising. Store windows, interior display, sales promotion activities and techniques in displaying fashion. (Identical to Business 152.)

**154 (CA&S 15) FASHION AND THE CONSUMER (3).** *Three lecture hours per week.* A consideration of the apparel needs of various groups, and of the many forces (economic, sociological; psychological and technological) which influence the consumer and the fashion market. (Identical to Business 154.)

**155 (CA&S 46) SALES DEMONSTRATION TECHNIQUES (2).** *Two lecture hours per week.* Development of techniques for demonstrating fabrics, equipment, clothing, foods and other subjects of promotional and educational use.

**301 (CA&S 1) FOOD SELECTION AND PREPARATION (3).** *Two lecture and three lab hours per week.* A study of scientific principles of selection, storage and preparation of food. Presentation and economy are emphasized.

**302 (CA&S 2) FOODS—U. S. AND FOREIGN** *Two lecture hours and three lab hours per week.* Food buying, meal preparation and service. Emphasis on kitchen equipment and organization, quick meals, economical meals and foreign cookery.

**303 (CA&S 3) MEALS FOR ONE OR TWO (2). (Credit/No credit).** *Two lecture hours per week.* Selection of foods to fit the budget of time, equipment, and money. Designed to aid the individual to meet his or her nutritional needs.

**305 (CA&S 52) GOURMET FOODS (2).** *Two lecture hours per week.* Planning, selection and preparation of foods for meals for optimum health. Designed especially for those who wish to serve gourmet, nutritional meals.

**310 (CA&S 9) NUTRITION (3).** *Three lecture hours per week.* Basic concepts of nutrition and its relationship to health of people of all ages, with application to the



selection of foods to meet nutritional needs of the individual. (Identical to Health Science 310).

**320 (CA&S 6) FOODS—WEIGHT CONTROL (2).** *Two lecture hours per week.* A nutritional survey of the problem of weight control with emphasis on energy metabolism, causes of obesity, treatment of obesity, and critique of fad diets and aids. Also a study of necessary modifications in normal diet to restore and maintain ideal weight.

**412 (CA&S 45) CONSUMER ISSUES AND BUYING PROBLEMS (3).** *Three lecture hours per week.* Study of problems facing the consumer; relationship of quality and cost to food, clothing, housing; resource management, legislation and agencies protecting the consumer. (Identical to Bus. 412/Econ. 412.)

**450 (CA&S 40) INTERIOR FURNISHINGS (3).** *Two lecture and three lab hours per week.* Selection of furniture, wall treatments, floor coverings and materials from an artistic and practical standpoint. Demonstration techniques include construction of draperies, bedspreads and slip covers.

**647 (CA&S 47) COOPERATIVE EDUCATION (1-4).** **(Credit/No-credit).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**666 (CA&S 5) CAREERS IN HOME ECONOMICS (1).** *One lecture hour per week.* Introduction to the range of subject matter to be selected in two- and four-year programs in Home Economics curriculum.

**680 (CA&S 48) SELECTED TOPICS IN HOME ECONOMICS (1-3).** *Hours by arrangement.* Selected topics in Home Economics not covered by regular catalog offerings. Course content and unit credit to be determined by the Health and Service Careers Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (CA&S 49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Horticulture

**647 (47) COOPERATIVE EDUCATION (1-4).** **(Credit/No credit).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133).

**680 (48) SELECTED TOPICS IN HORTICULTURE (1-3).** *Hours by arrangement.* Selected topics in Horticulture not covered by regular catalog offerings. Course content and unit credit to be determined by the Health Service Careers Division in relation to community-student need and/or available staff. May be offered as seminar, lecture or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Horticulture—Ornamental

**701-702 (91a-91b) GENERAL ORNAMENTAL HORTICULTURE I and II (3-3).** *Three lecture hours per week.*

**701—**Soils, manures and fertilizers, lawn establishment and turf management.

**702—**Plant propagation, pruning, choice of plant tools and machinery, insecticides, fungicides and weed killers.

**705 (93) SOILS AND PLANT GROWING (3).** *Three lecture hours per week.* Fundamental principles and soils, soil management, fertility and plant nutrition. Soil types, origins, characteristics; biological relationships. Commercial and natural fertilizers; soil conditioners; growing media, crop rotation, and watering.

**706 (94) PLANT PROPAGATION (3).** *Three lecture hours per week.* Principles and practices of propagating plants for sale for landscape use, including laboratory work in making cuttings, grafting and budding, potting, canning. Visits to wholesale and retail nurseries. Seedage, cuttage, layerage, plant breeding and improvement.

**711-712 (95a-95b) LANDSCAPE TREES AND SHRUBS I and II (3-3).** *Three lecture hours per week.*

**711—**Tree classification, description, nomenclature,

morphology. The study in class of trees commonly used in California parks and gardens. Emphasis on plant identification.

**712**—The study of shrubs and ground covers commonly used in California.

**721-722 (96a-96b) LANDSCAPE CONSTRUCTION I and II (3-3).** *Three lecture hours per week.* Principles of garden construction with emphasis on design appreciation and minimum maintenance. Lien laws and contractors' license laws. Estimates and bills of quantity. Design and installation of sprinkler systems. Visits to outstanding landscape projects.

**731-732 (97a-97b) ARBORICULTURE: SHRUBS AND FRUIT I and II (3-3).** *Three lecture hours per week.*

**731**—Principles and practices of arboriculture emphasizing care and maintenance of landscape trees.

**732**—The study of the training and management of fruit trees, bush fruits and ornamental shrubs.

**741-742 (98a-98b) GLASSHOUSE MANAGEMENT I and II (3-3).** *Three lecture hours per week.*

**741**—Study of greenhouses, lathhouses and nurseries and the materials used in their construction. Interior layouts. Ventilation, humidity and temperature control.

**742**—The propagation, and culture of roses, carnations, chrysanthemums, orchids, potted plants and other glasshouse crops. Pest and disease control.

**771-772 (90a-90b) PEST CONTROL: ENTOMOLOGY I and II (3-3).** *Three lecture hours per week.* Study of the common insect and mite pests which attack horticultural plants in the Bay Area. Identification, classification, life cycles and the latest methods of control.

**773-774 (90c-90d) PEST CONTROL: PLANT DISEASES I and II (3-3).** *Three lecture hours per week.* Study of the common disease-causing fungi, bacteria, physiological, nematode and virus pests which attack horticultural plants in the Bay Area. Identification, classification, life cycle and the latest methods of control.

**775 (90e) PEST CONTROL: INSECTICIDES, FUNGICIDES, EQUIPMENT (3).** *Three lecture hours per week.* History and development of pesticides, pest control equipment, insecticides, fungicides, disinfectants and nematocides. Soil fumigants, composition, formulation, uses, compatibilities. California Agriculture Code and pest-control operator's license examination.

**776 (90f) PEST CONTROL: WEEDS AND RODENTS (3).** *Three lecture hours per week.* Identification, dissemination methods and control of principal garden,

lawn and turf weeds, and weedy grasses. Herbicides, their characteristics and uses; brush control. Chief rodent and other animal pests of landscaped areas, and control methods.

## Horticulture— Environmental

**311-312 (110a-110b) PLANT AND LANDSCAPE I AND II (3-3).** *Two lecture and three lab hours per week.*

**311**—Growth habits, cultural requirements and landscape uses of ornamental trees adapted to the climates of California. Proper plant and maintenance techniques. (Fall only.)

**312**—Growth habits, cultural requirements and landscape; uses of ornamental shrubs and ground covers adapted to the climates of California. Proper planting and maintenance technique. (Spring only.)

**315 (111) LANDSCAPE MANAGEMENT (3).** *Two lecture and three lab hours per week.* Maintenance and management of turf areas, including golf courses, athletic fields, parks and residential areas. Cultural requirements of trees, shrubs, vines, annuals and ground cover. Operation of landscape maintenance equipment. (Fall only.)

**320 (118) INTRODUCTORY PLANT SCIENCE (3).** *Three lecture hours per week.* Introduction to scientific principles of higher plant structure, function, and reproduction to serve as a basis for further practical course work in field of Horticulture. (Identical to Biology 320.)

**327 (112) PLANT GROWING (3).** *Two lecture hours per week.* Soil, plant and fertilizer relationships. The study of plant propagation, nursery practice and greenhouses. Soil, plant and fertilizer relationships. Practical experience in growing plants in the greenhouse. (Identical to Biology 327.)

**330 (114) INSECTS, WEEDS AND DISEASES CONTROL (3).** *Two lecture and three lab hours per week.* Symptoms, identification and methods of control of the principal diseases, pests and weeds important in California landscape industry. Chemical, biological and cultural control and prevention. (Spring only.)

**340 (115) GARDEN DESIGN (3).** *Two lecture and three lab hours per week.* Introductory graphics, drafting, environmental planning and design for the garden landscape. (Fall only.)

**341 (120) LANDSCAPE DESIGN (3).** *Two lecture and three lab hours per week. Prerequisite: Horticulture 340 or equivalent.* Advanced graphics techniques, environmental planning and design, planting, structures, engineering, materials, and history of the landscape. (Spring only.)

**342 (113) LANDSCAPE CONSTRUCTION (3).** *Two lecture and three lab hours per week.* Planting and construction techniques; design, installation and maintenance of sprinkler systems; cost finding and estimating for the landscape trades, including legal aspects of contracting. (Assists students in preparing for Landscape Contractor's License Examination—C27.) (Spring only.)

**411 (116) BASIC FLORISTRY (3).** *Two lecture and three lab hours per week.* The study of floral design using flowers and foliage as related to the florist's style of arrangement. The student is taught the history of floral design, the care and conditioning of cut flowers and foliage.

**412 (117) ADVANCED FLORISTRY (3).** *Two lecture and three lab hours per week. Prerequisites: Floristry 411 or equivalent.* An advanced study of commercial floral designs, including corsages, wedding bouquets, party decor and funeral tributes. Emphasis on the development of individual creative design skills.

**415 (119) RETAIL NURSERY (3).** *Two lecture and three lab hours per week.* Practical course of procedures used in the operation of retail nursery and florist shop. Emphasis on the evaluation of nursery stock and cut flowers and on marketing, shop records, shipping, buying, employee relations and quality control of flowers, plants and floral pieces.

## Horticulture—Vocational Gardening

**801-802 (130a-130b) VOCATIONAL AND PLANT MATERIAL I AND II (3-3).** *Three lecture hours per week.* Principles of plant classification and nomenclature. The study of stems, roots, leaves and flowers. Floral families. The identification of plant materials used in California gardens and landscaping

**801**—Emphasizes the landscape use of trees.

**802**—Emphasizes the landscape use of shrubs and ground covers.

**811-812 (132a-132b) GENERAL VOCATIONAL GARDENING I AND II (3-3).** *Three lecture hours per week.*

**811**—Garden and landscape management with empha-

sis on soils, fertilizers and soil fertility, leading to the culture of ornamental and sports turf. Culture of annuals and perennials.

**812**—Garden and landscape management with emphasis on pruning and training ornamental trees, fruit trees and shrubs. Horticulture tools, machines and pesticides.

**821-822 (135a-135b) VOCATIONAL LANDSCAPE GARDENING I AND II (3-3).** *Three lecture hours per week.*

**821**—Basic principles of landscape design and design appreciation. Irrigation system design and repair. Visits to outstanding landscapes.

**822**—Landscape construction. Patios, decks, pools, concrete and brickwork. Estimating techniques. Law related to the landscape industry.

## Humanities

(See also History and Philosophy)

**101 (1) INTRODUCTION TO HUMANITIES: GREECE TO RENAISSANCE (3).** *Three lecture hours per week.* The History and Philosophy Departments explore the major cultural and intellectual movements of Western Civilization from Greece to the Renaissance. The development of literature, art, architecture, and music are considered, along with their relationship to mythological, religious, and scientific attitudes toward man, nature and God.

**102 (2) INTRODUCTION TO HUMANITIES: REFORMATION TO PRESENT (3).** *Three lecture hours per week.* The History and Philosophy Departments explore the major cultural and intellectual movements of Western Civilization from the Reformation to the present. The development of literature, art, architecture, and music are considered, along with their relationship to mythological, religious, and scientific attitudes toward man, nature and God.

**111 MAN AND HIS PLACE IN THE COSMOS: CLASSICAL CIVILIZATIONS (3).** *Three lecture hours per week.* The development of consciousness as reflected in changing attitudes toward the gods, nature, society and self. Examples drawn from Greek and Roman mythology, art, drama and philosophy will focus on the heroic struggle of the individual to come to terms with the demands of justice and morality, to find meaning in suffering, to reckon with both fate and freedom and to forge a position regarding life after death. Comparisons will be made with world views held by African, American Indian and Hebraic cultures.

**112 MAN AND HIS ARTISTIC CREATIONS: THE MIDDLE AGES AND RENAISSANCE (3).** *Three lecture hours per week.* The development of art and architecture from the early centuries to the end of the Middle Ages. Course includes: rise of Christianity, church vs. state, Moslem and African art, Medievalism, the Renaissance, and Counter-Reformation.

**113 MAN AND NATURE: THE IMPACT OF THE NEW SCIENCE, 17th TO 19th CENTURIES (3).** *Three lecture hours per week.* The development of modern science and the impact of the New Science on life and culture in the 17th through 19th centuries are examined from a humanistic perspective. Specific topics include new conceptions of human destiny; the new scientific method and "reality"; the social and ecological effects of industrialization; the impact of technologically advanced Europe on the rest of the world; literary, artistic, philosophical, and political reactions to the new scientific culture; and the limitations of the scientific values and world view.

**114 MAN AND MAN: LITERATURE AND FILM AS COMMUNICATION IN THE 20th CENTURY (3).** *Three lecture hours per week.* Human communication through drama, literature and film in the 20th century. Central to the course will be an exploration of the attempt to the 20th century "rebel" to survive the breakdown of traditional forms and to reconstruct a meaningful set of values based on humanistic traditions developed in the past.

**125 (25) TECHNOLOGY, CONTEMPORARY SOCIETY, AND HUMAN VALUES (3).** *Three lecture hours per week.* A humanistic and critical analysis of the impact of contemporary technology on the environment, economic and political systems, warfare, education, philosophy, behavior control, and human relations. Reasons for the rise of technological civilization in the West, the phenomenology of modern technology, and the problem of control are examined.

**136 CREATIVE WOMEN IN MODERN TIMES (3).** *Three lecture hours per week.* Explores the works and projects created by women in the western world from the Renaissance to the present. The achievements of women in statecraft, philosophy, the visual arts, music, photography and film making.

**140 CULTURAL HERITAGE OF SAN FRANCISCO AND ITS ENVIRONS (3).** *Three lecture hours per week.* Survey of the history, art, architecture, music, literature and geography of San Francisco and its environs. Course covers early California as well as the present, but the major emphasis is upon the decades

from the Gold Rush to the end of the 19th Century. San Francisco tours are part of the course.

**680 (48) SELECTED TOPICS IN HUMANITIES (1-3).** *Hours by arrangement.* Selected topics in Humanities not covered by regular catalog offerings. Course content and unit credit to be determined by the Social Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field (Note: Students normally may receive credit for only one Special Project per semester.)

## Insurance

**110 (BUS 80a) ECONOMIC SECURITY AND INDIVIDUAL LIFE INSURANCE (3).** *Three lecture hours per week.* Economic security needs, human behavior, professionalism and ethics in life and health insurance. Individual life, health, and annuity contracts. (Preparation for CLU Examination, HS 301.)

**120 (BUS 80b) LIFE INSURANCE LAW AND MATHEMATICS (3).** *Three lecture hours per week.* Legal aspects of contract formation, policy provisions, assignments, ownership rights, creditor rights, beneficiary designations and disposition of life insurance proceeds. The mathematics of life insurance. (Preparation for CLU Examination, HS 303.)

**130 (BUS 80c) GROUP AND SOCIAL INSURANCE (3).** *Three lecture hours per week.* Analysis of group life and health insurance, including products, marketing, underwriting, reinsurance, premiums and reserves. Governmental programs related to the economic problems of death, old age, unemployment, and disability. (Preparation for CLU Examination, HS 303.)

**140 (BUS 80d) ECONOMICS OF INSURANCE (3).** *Three lecture hours per week.* Economic principles which have an effect on the national economy, national income, price determination, business cycles, money and banking, monetary and fiscal policy and international trade and finance. (Preparation for CLU Examination, HS 304.)

**150 (BUS 80e) ACCOUNTING AND FINANCE (3).** *Three lecture hours per week.* Basic accounting principles including data accumulation systems, income measurement, valuation of assets and liabilities and financial statement analysis. The accounting process and preparation of financial statements. (Preparation for CLU Examination, HS 305.)

**160 (BUS 80f) INVESTMENTS AND FAMILY FINANCIAL MANAGEMENT (3).** *Three lecture hours per week.* Investment principles and their application to family finance. Yields, limited income securities, investment markets and common stock. Family budgeting, property and liability insurance, mutual funds, variable annuities and aspects of other investment media. (Preparation for CLU Examination, 306.)

**170 (BUS 80g) INCOME TAXATION (3).** *Three lecture hours per week.* The federal income tax system with particular reference to the taxation of life insurance and annuities. The income taxation of individuals, sole proprietorships, partnerships, corporations, trusts and estates. (Preparation for CLU Examination, HS 307.)

**180 (BUS 80h) PENSION PLANNING (3).** *Three lecture hours per week.* Basic feature of pension plans, profit-sharing plans and tax-deferred annuities. Also, thrift and savings plans and plans for the self-employed. Employees Retirement Income Security Act of 1974. (Preparation for CLU Examination, HS 308.)

**190 (BUS 80j) BUSINESS INSURANCE (3).** *Three lecture hours per week.* Business uses of life and health insurance, including proprietorship, partnership and corporation continuation problems. Also other business uses of life and health insurance. (Preparation for CLU Examination, HS 309.)

**200 (BUS 80k) ESTATE PLANNING AND TAXATION (3).** *Three lecture hours per week.* Estate and tax planning, the use of trusts, life insurance, powers of appointment, wills, lifetime gifts and the marital deduction. (Preparation for CLU Examination, HS 310.)

## Japanese

**Language Laboratory and Listening Requirements**—Students enrolled in certain courses in foreign language are required to make use of the language laboratory as prescribed by each department. Imitation, response and independent practice are integral features of a foreign language at the College.

**100 (1) ELEMENTARY JAPANESE (5).** *Five lecture hours and one lab hour per week.* Principles of basic patterns of study of the writing system. Emphasis is given to oral expression, reading, and written forms of Japanese.

**101 (1a) ELEMENTARY JAPANESE I (3).** *Three lecture hours plus one lab hour per week.* Approximately half of the semester's work in Japanese is covered in this course.

**102 (1b) ELEMENTARY JAPANESE II (3).** *Three lecture hours plus one lab hour per week.* Prerequisite: Japanese 101 or equivalent. Approximately the second half of the semester's work in Japanese 100 is covered. Japanese 101 and 102 are equivalent to Japanese 100.

**110 (2) ADVANCED ELEMENTARY JAPANESE (5).** *Five lecture hours plus one lab hour per week.* Prerequisite: Japanese 100 or 102 or equivalent. Further study of basic patterns of Japanese.

**111 (2a) ADVANCED ELEMENTARY JAPANESE (5).** *Three lecture hours plus one lab hour per week.* Prerequisite: Japanese 100 or 102. Approximately half of the semester's work in Japanese 110 is covered in this course.

**112 (2b) ADVANCED ELEMENTARY JAPANESE II (3).** *Three lecture hours plus one lab hour per week.* Prerequisite: Japanese 111 or equivalent. Approximately the second half of the semester's work in Japanese 110 is covered. (Japanese 111 and 112 are equivalent to Japanese 110.)

## Journalism

**110 (1) INTRODUCTION TO JOURNALISM (3).** *Three lecture hours per week.* A study of the historical background and modern functioning of the press (newspaper, radio, magazine, television) in a democratic society, and the values and shortcomings of each. The rights and duties of journalists, and the legal limits of the liberty of the press are studied.

**120 (2) NEWSWRITING (3).** *Two lecture and two lab hours per week.* Prerequisite: Journalism 110. Techniques of news gathering, judging news values, and writing the news story. For practical experience, the students write for the college paper, "The San Matean," thus preparing them for future newspaper work.

**300 (15) NEWSPAPER PRODUCTION (2).** *Four lecture hours per week.* Prerequisite: Journalism 120 (may be

taken simultaneously). Production of the student newspaper, "The San Matean." Discussion and criticism of staff organization and newspaper content. (May be repeated for credit.)

**310 (16) MAGAZINE PRODUCTION (2).** *Four lecture hours per week.* Production of the student magazine, "Pendulum." Discussion of techniques of publishing and production, especially applied to school publications. (May be repeated for credit.)

**680 (48) SELECTED TOPICS IN JOURNALISM (1-3)** *Hours by arrangement.* Selected topics in journalism not covered by regular catalog offerings. Course content and unit credit to be determined by the Language Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field (Note: Students normally may receive credit for only one Special Project per semester.)

## Labor Studies

**110 (11) LEGAL FOUNDATIONS: LABOR LAW AND MINORITY RIGHTS (3).** *Three lecture hours per week.* The development of the basic legal framework and doctrines governing labor-management relations, and the rights of minorities in the context of the labor movement.

**120 (12a) LABOR RELATIONS LAW (3).** *Three lecture hours per week. Prerequisite: None. Labor Studies 110 is recommended.* An examination of the legal and administrative policies and practices followed in establishing and maintaining collective bargaining relationships. Emphasis on national labor-management relations law in the private sector, with added discussion of emerging labor relations in the public sector.

**125 (12b) COLLECTIVE BARGAINING (3).** *Three lecture hours per week. Prerequisite: None. Labor Studies 120 is recommended.* Examines the collective bargaining process, with special attention to the sources and uses of basic data, and to the dynamics of the process, both in private and public sectors.

**140 (14) GRIEVANCE HANDLING AND ARBITRATION (3).** *Three lecture hours per week.* A practical, applied study of grievance handling as a continuation of the collective bargaining process, emphasizing arbitration as the final step in resolving grievances. Utilizes role-playing techniques of instruction.

**150 (15) RESPONSIBILITIES AND PSYCHOLOGY OF LEADERSHIP (3).** *Three lecture hours per week.* A non-technical exploration of interpersonal relationships affecting the ability of individuals to function effectively in leadership roles, with emphasis on understanding social behavior and group conflict. Role-playing techniques are used to demonstrate ways of handling problems related to the functions of leaders of unions and community groups.

**200 (20) LABOR AND POLITICS (3).** *Three lecture hours per week.* An historical survey of the philosophy, organization and activities of labor unions and their members in the American political process, with special consideration of contemporary aspects. Introduction to organized labor's interests and involvement in American politics, with emphasis on the relationship between labor's legislative-political goals and collective bargaining.

**290 (10) THE AMERICAN LABOR MOVEMENT (3).** *Three lecture hours per week.* A survey of the history, structure and institutions of the organized labor movement in the United States, covering developments from the colonial era to the present, with the greatest emphasis on trends since the Civil War. Particular attention is given to labor's role in California and the Bay Area. (Identical to History 290, with Hist. 201 or 202, fulfills American Institutions requirement.)

**680 (48) SELECTED TOPICS IN LABOR STUDIES (1-3).** *Hours by arrangement.* Selected topics in Labor Studies, not covered by regular catalog offerings. Course content and unit credit to be determined by the Social Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN LABOR STUDIES (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level course in the subject field. (Note: Students normally receive credit for only one Special Project per semester.)



## Learning Center

(See Tutoring)

## Library Science

**100 (1) INTRODUCTION TO LIBRARY RESOURCES (1-2).** Minimum of three lab hours per week by arrangement. Self-paced course in the use of library resources. Instruction in the use of the card catalog, reference books, periodical and subject indexes, dictionaries, encyclopedia and other general and specialized materials. Instruction in the organization and preparation of term papers and bibliographies.

## Life Science

(See Biology)

## Literature

**101 (ENGL 27) CONTEMPORARY LITERATURE (3).** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Study of selected fiction, poetry and drama of the 20th Century. Lectures, discussions, related reading, writing of critical papers. (Spring only.)

**105 (ENGL 22) THE BIBLE AS LITERATURE (3).** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Study of the significant writings of the Old and New Testaments and of the Apocrypha.

**111 (ENGL 21) THE SHORT STORY (2).** Two lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Study of short stories. Class discussion and reports; lectures.

**113 (ENGL 26) THE NOVEL (3).** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Study of novels of late 19th and 20th Centuries and of various aspects of literary criticism. Reading, discussion and critical papers.

**115 (ENGL 23) INTRODUCTION TO POETRY (3).** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Lectures concerning the various elements of and approaches to poetry. Intensive and extensive reading, discussion, critical papers. (Spring only.)

**143 (ENGL 24) MODERN DRAMA (3).** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Study, from a theatrical as well as a literary point of view, of the outstanding masterpieces of the modern theatre. Lectures; discussion; recordings by professional actors.

**151 (ENGL 25) SHAKESPEARE.** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Emphasis upon Shakespeare's poetic and dramatic growth as a writer through a study of representative plays and poems. Reading, discussion, critical papers.

**200 (ENGL 30) MAJOR FIGURES IN AMERICAN LITERATURE.** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Study of the writings of some of the major figures in American literature. Intensive reading, lectures, discussion, papers. (May be repeated for credit.)

**201 (ENGL 31a) AMERICAN LITERATURE I (3).** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Study of American literature from the beginning through the period of Mark Twain. Lectures: reading, analysis and discussion of selected works, papers.

**202 (ENGL 31b) AMERICAN LITERATURE II (3).** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Study of American literature since Mark Twain. Lectures, reading, analysis and discussion of selected works, papers.

**231 (ENGL 46a) SURVEY OF ENGLISH LITERATURE I (3).** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Study of the typical works of major English writers from Chaucer to the end of the 18th Century. Lectures, discussions, records. (Recommended for English majors.)

**232 (ENGL 46b) SURVEY OF ENGLISH LITERATURE II (3).** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Study of the typical works of major English writers of the 19th and 20th Centuries. Lectures, discussions, recordings. (Recommended for English majors.)

**251 (ENGL 29) WOMEN AND LITERATURE (3).** Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent. Survey images of women in literature from 1600 to present. Study of selected women writers. Reading, discussion and critical papers.

**266 (ENGL 43) BLACK LITERATURE (3).** *Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent.* Comprehensive survey of the Afro-American letters in the United States from 1619 to the present. (Identical to Ethnic Studies 266).

**301 (ENGL 42a) WORLD LITERATURE MASTERPIECES I. (3).** *Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent.* Study of various works of European literature from the classical period to the 17th Century. Reading, analysis and discussion of secluded works; written reports; lectures.

**302 (ENGL 42b) WORLD LITERATURE MASTERPIECES II (3).** *Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent.* Study of various works of European literature from the 17th Century to the present, with emphasis on European prose. Readings, analysis and discussion of selected works; written reports, oral readings and lectures.

**430 (ENGL 20) MYTHOLOGY AND FOLKLORE (3).** *Three lecture hours per week. Prerequisite: Engl 110, 120, 130, or 140 or equivalent.* A survey of major gods and heroes, recurring mythological themes, and relationships between man and his gods, primarily in the Greek and Roman cultures.

**451 (ENGL 16a) FILM HISTORY I (3).** *Three lecture and two lab hours per week.* A survey of the evolution of the motion picture from the earliest efforts to European and American filmmakers through post-World War II productions. Emphasis on film appreciation, on the language of film, and on analysis for full film enjoyment. (Identical to Art 451.)

**452 (ENGL 16b) FILM HISTORY II (3).** *Three lecture and two lab hours per week. Prerequisite: Lit. 451.* Further study of the evolution of the motion picture. Emphasis on film appreciation, on the language of film, and on analysis for full film enjoyment. (Identical to Art 452).

**461 (ENGL 15a) FILMMAKING I (4).** *Three lecture and six lab hours per week.* Introduction of film theory, aesthetics, and 8mm production; includes screenplay writing and critical writing as well as crew work on videotape productions and super-8mm motion picture. (Identical to Art 461).

**462 (ENGL 15b) FILMMAKING II (4).** *Three lecture and six lab hours per week. Prerequisite: Lit. 461.* Advanced theory, aesthetics and 8mm production. Students will work on a production crew as well as writing and producing their own motion pictures. (Identical to Art 462). (May be repeated for credit.)

**643 (ENGL 47) COOPERATIVE EDUCATION (1-4).** **(Credit/No credit).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (ENGL 48) SELECTED TOPICS IN ENGLISH (1-3).** *Hours by arrangement.* Selected topics in English not covered by regular catalog offerings. Course content and unit credit to be determined by the Language Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (ENGL 49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**841 (ENGL 75) FILM STUDY: THE CINEMA (2).** *One lecture and two lab hours per week.* Viewing of a number of significant motion pictures; analyzing, interpreting and evaluating these films; discussion of specific pictures and cinema in general.

## Machine Tool Technology

**100 APPLIED MACHINE TOOL MATHEMATICS (3).** *Three lecture hours per week. Prerequisites: None.* Partial applications of basic arithmetic, algebra, geometry and trigonometry, volumetric calculations and tables as applied to machine tool problems. Use of electronic calculators and Machinery's Handbook.

**110-120 MACHINE TOOL THEORY FOR THE LATHE I AND II (1½-1½).** *Three lecture hours per week for eight weeks. Prerequisite: M.T.T. 110 — concurrent enrollment in M.T.T. 111; M.T.T. 120 — concurrent enrollment in M.T.T. 121.* Basic theory of metal removal with emphasis on lathe operation. Safety and other related subjects are covered.

**111-121 MACHINE TOOL PRACTICE FOR THE LATHE I AND II (1½-1½).** *Nine lab hours per week for eight weeks. Prerequisite: M.T.T. 111 — concurrent enrollment in M.T.T. 110; M.T.T. 121 — concurrent enrollment in M.T.T. 120.* Laboratory experience in lathe operations and set-ups with emphasis on precision measurement, finishes, thread cutting, machine maintenance, shop practices and other related sub-

jects. Students will be required to purchase personal tools.

**210-220 MACHINE TOOL THEORY FOR THE MILL I AND II (1½-1½).** Three lecture hours per week for eight weeks. Prerequisite: M.T.T. 210 — concurrent enrollment in M.T.T. 211; M.T.T. 220 — concurrent enrollment in M.T.T. 221. The basic theory of metal removal with emphasis on milling machine operation. Bench metals, layout, measurement and other subjects are also covered.

**211-221 MACHINE TOOL PRACTICE FOR THE MILL I AND II (1½-1½).** Nine lab hours per week for eight weeks. Prerequisite: M.T.T. 211 — concurrent enrollment in M.T.T. 210; M.T.T. 221 — concurrent enrollment in M.T.T. 220. Machine operations and other laboratory activities with emphasis on the use of milling machines, set-up, layout, precision measurement, applied metallurgy and heat-treating, machine maintenance.

**230 BLUEPRINT READING (1).** Two lecture hours per week for eight weeks. Prerequisite: None. This course is to provide the machinist with the skills needed to read shop drawings. Views, projections, dimensioning, symbols, tolerances, sketching and other related topics are covered.

**680 (48) SELECTED TOPICS IN MACHINE TOOL TECHNOLOGY (1-3).** Hours by arrangement. Selected topics in Machine Tool Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Technology Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**700 NUMERICAL CONTROL MACHINE (1).** One lecture and three lab hours per week for eight weeks. Prerequisite: None. Basic principles and practices of manual programming with emphasis on machine set-ups, absolute and incremental programming, control systems, numerical systems and codes. Recommended for students enrolled in machine program or for those with prior machining experience.

**710 GRINDING PROCESSES (1).** One lecture and three lab hours per week for eight weeks. Prerequisite: None. Basic principles of grinding including wheel nomenclature, abrasives applications and grinding machines. Geometry of cutters and other tool grinding applications. Surface finishes and inspection techniques. Recommended for those with prior machining experience or students enrolled in the machine tool program.

**712 MACHINE TOOL BASIC LAB (½).** One lab hour per week, by arrangement, for eight weeks and/or completion of prescribed program. Prerequisites: None. This self-paced program is an audio-visual presentation that allows the student to learn the basics of machine tool processes at his/her individual rate. By completing the prescribed program, the student may enter the machine tool program at specified half-semester points. Concurrent enrollment in M.T.T. 100 and M.T.T. 230 is suggested.

**720 TOOL AND DIE THEORY AND PRACTICE (1).** One lecture and three lab hours per week for eight weeks. Prerequisite: None. Fundamentals of tool and die manufacturing with emphasis on nomenclature, die design for the basic processes: i.e., punches, blanking, piercing and bending. Recommended for those with prior machining experience or students enrolled in the machine tool program.

**750 (102a) MACHINE TOOL THEORY AND PRACTICE I (2).** One lecture and three lab hours per week. Survey of machine tool processes. Recommended for the engineer, draftsman, technician and machinist trainee. Subjects covered: bench work, measurement, threads, cutting tools, lathe, mills, grinding, saws and others. (Extra supplies may be required.)

**755-760 (102b-102c) MACHINE TOOL THEORY AND PRACTICE II AND III (2-2).** One lecture and three lab hours per week. Prerequisite: M.T.T. 750. Intermediate and advanced studies in machine tool. Allows student to develop skill in individual areas of interest — tool and cutter grinding, E.D.M., tool design, numerical control programming, thread cutting and others. (Extra supplies may be required.)

**770 (140) MANUAL NC PARTS PROGRAMMING (3).** Three lecture hours per week. Prerequisite: Post-high school machine tools course or equivalent. Actual training programming NC tools. Concentrates on point-to-point machine tools with some exposure to contouring.

## Management

**100 (99) INTRODUCTION TO BUSINESS MANAGEMENT (3).** *Three lecture hours per week.* Survey of business principles and practices, problems and procedures, background of American business, organization, ownership, financing, production and distribution of goods. (Satisfies Bus. 100 requirements for A.A. degree in Business and is required for Management certificate and AA degree.)

**105 (50) FINANCIAL MANAGEMENT (3).** *Three lecture hours per week.* Designed to acquaint the beginning student with many of the concepts of financial management (analysis of accounting statements, acquisition of funds, use of leverage, time value of money, management of cash, etc.). Planning, analysis and control fundamentals for decision-making.

**110 (52) REPORT WRITING (3).** *Three lecture hours per week.* A study of the principles of effective communication in a variety of business and industrial applications; clarity, accuracy and logic are emphasized in the presentation of written, verbal and statistical materials.

**120 (54) MANAGEMENT COMMUNICATIONS (3).** *Three lecture hours per week.* The communication process — both verbal and written. Lectures, discussion, case studies and oral presentations on such topics as the relationship between communication and the organizational climate, perception, motivation and the causes and patterns of mis-communication.

**125 (55) GROUP COMMUNICATIONS DYNAMICS (3).** *Three lecture hours per week. Prerequisite: Mgmt. 120.* Development of understanding and skill in interpersonal communication in business and industrial groups. Students work in problem-solving groups for experimental learning. Group process theory discussed.

**130 (61) LABOR RELATIONS FOR MANAGEMENT (3).** *Three lecture hours per week.* Employer and union policies affecting the labor market, emphasizing: wage systems, living conditions, productivity, unemployment, union organizations and collective bargaining. Industrial conflicts from the point of view of wage earner, employer and government.

**135 (63) PLANNING, BUDGETING AND CONTROL FOR SUPERVISORS (3).** *Three lecture hours per week.* Planning, budgeting and control for supervisors and managers: project planning, work breakdown, project goals, scheduling systems (Gantt charts, PERT,

CPM), cost estimating and cost curve displays; initiating action; performance reporting; corrective action techniques.

**140 (65) BUSINESS AND INDUSTRIAL ECONOMICS (3).** *Three lecture hours per week. (Econ. 100 and 102 may be substituted.)* Supply and demand concepts and their operation in the market place. The overall effect of GNP, population trends, savings, investment, full employment and inflation, production decision-making, revenue estimating and profit maximization.

**200 (71) MATERIALS MANAGEMENT (3).** *Three lecture hours per week.* Planning and scheduling, material and inventory planning, flow control, mechanical tabulation, identification systems. Designed to show how large and small businesses plan and control production in order to achieve competitive pricing of goods and services.

**205 (72) MOTION STUDY AND METHODS ANALYSIS (3).** *Three lecture hours per week.* Techniques for finding the most economical way of doing a manual task and for measuring labor accomplishment. Application of time and motion study to lower cost production through better methods, procedure, tooling, product design and the elimination of wasteful practices.

**210 (77) INDUSTRIAL ENGINEERING METHODS (3).** *Three lecture hours per week.* Overall view of manufacturing management. Fundamentals of organization, capital costs and budgets, motion and time study, industrial statistics, operations, research.

**215 (80) MANAGEMENT OF HUMAN RESOURCES (3).** *Three lecture hours per week.* An introductory course designed for line supervision to develop understanding of the personnel function as it relates to industry; selection and placement; wage and salary procedures; training and evaluation.

**220 (85) ORGANIZATIONAL BEHAVIOR (3).** *Three lecture hours per week.* Individual motivation, interpersonal communication, organizational influence, group dynamics, and decision-making in the organization; the relationship between culture, structure and technology; leadership and the managing of organization conflict.

**225 (90) OFFICE MANAGEMENT (3).** *Three lecture hours per week.* Organization and planning of office services, office environment and equipment; human relations and behavioral concepts; new dimensions of information management. Review and update preparatory to Certified Administrative Manager examination.

**230 (91) SALES MANAGEMENT (3).** *Three lecture hours per week.* Organization of the sales force; operating a sales force including selecting, training, compensating, supervising and stimulation. Planning sales force activities; operations including forecasting, budgeting, establishing territories, and quotas. Analysis of sales operations and evaluation of productivity.

**235 (92) TECHNIQUES OF SUPERVISION (3).** *Three lecture hours per week.* Role of the manager, understanding and motivating employees, leadership, communications, problem solving and decision making, employee training, performance evaluation, labor relations, supervising different types of workers, delegation, improving work methods and reducing costs, planning and managing time.

**240 (93) ORGANIZATIONAL LEADERSHIP (3).** *Three lecture hours per week.* Introduction to the motivational aspects of leadership. Examines how individuals react to different styles of leadership. Students will examine their own management practices and beliefs, and gain insights into how these might be improved.

**245 (96) ORGANIZATION FOR MANAGEMENT (3).** *Three lecture hours per week.* A study of the principle functions of modern management such as planning, organizing, staffing, actuating, controlling and decision-making.

**300 (BUS 30) PRINCIPLES OF BANK OPERATIONS (3).** *Three lecture hours per week.* Survey of the fundamentals of bank functions and operations, including bookkeeping operations of day-to-day activity, bank services related to loans, savings, trusts. Federal Reserve System as related to bank operations.

**301 (BUS 31) INSTALLMENT CREDIT (3).** *Three lecture hours per week.* Study of the broad field of installment credit and lending from the standpoint of both the public relations and profit position.

**303 (BUS 32) FINANCIAL STATEMENT ANALYSIS (3).** *Three lecture hours per week.* Study of financial statement analysis: balance sheet, profit and loss statement, analysis of working capital changes and inventories, relating balance sheet accounts to sales.

**680 (48) SELECTED TOPICS IN MANAGEMENT (1-3).** *Hours by arrangement.* Selected topics in Management not covered by regular catalog offerings. Course content and unit credit to be determined by the Business Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement.* Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

ADMISSIONS AND REGISTRATION  
COLLEGE OF SAN MATEO  
1700 W. HILLSDALE BLVD.  
SAN MATEO, CALIFORNIA 94402

## Mathematics

See also Business 810, 115

The normal sequence of mathematics courses at CSM is 110, 115, 120, 130, 220, 260, 261, 262, 263, 275. A student who qualifies for a particular mathematics course is eligible for any course lower in sequence. If the student has not taken a mathematics course during the previous two years, it is strongly recommended that the student enroll in a course below the one for which he/she would normally be eligible.

**105 (16) ELEMENTARY SCHOOL MATHEMATICS (3).** *Three lecture hours per week.* Development of the real number system, logic, axiomatics, systems of numeration, history and development of arithmetic, arithmetic processes, inductive and deductive reasoning.

**110 (11) ELEMENTARY ALGEBRA (5).** *Day—Five lecture hours per week. Evening—six lecture hours per week.* Elementary Algebra through quadratic equations.

**111-112 (11a-11b) ELEMENTARY ALGEBRA I AND II (3-3).** *Three lecture hours per week.* A two-semester study of elementary algebra through quadratic equations.

**115 (12) GEOMETRY (5).** *Day—five lecture hours per week. Evening—six lecture hours per week.* Prerequisite: Math 110 with grade C or better, or one year of high school Algebra with grade C or better. Study of the properties of plane and solid figures, using formal logic and the real number system. Some non-Euclidean, projective and topological elements are included.

**119 REVIEW OF ALGEBRA (3).** *Three lecture hours per week.* Prerequisite: Math 110 with grade C or better. A comprehensive review of elementary algebra with certain topics studied in greater depth.

**120 (19) INTERMEDIATE ALGEBRA WITH REVIEW (5).** *Day—five lecture hours per week. Evening—six*

lecture hours per week. Prerequisite: Math 110 with grade C or better. Recommended: Math 115 with grade C or better, or one year of high school Geometry with grade C or better. A comprehensive review of elementary algebra with certain topics studied in greater depth. Extension of fundamental algebraic concepts and operations, equations in two variables, graphs, systems of equations, exponential and log functions, sequences and series.

**121 INTERMEDIATE ALGEBRA (3).** Three lecture hours per week. Prerequisite: Math 119 with grade C or better, or passing score on qualifying examination. Extension of fundamental algebraic concepts and operations, equations in two variables, graphs, systems of equations, exponential and log functions, sequences and series.

**125 (13) ELEMENTARY FINITE MATHEMATICS (3).** Three lecture hours per week. Prerequisite: Math 120 with grade C or better, or 1½ years of Algebra and one year Geometry with grades C or better. An introduction to finite mathematics including set theory, logic, combinatorial techniques, elementary probability, systems of linear equations, matrices and linear programming. A variety of business applications is included.

**130 (21) ANALYTIC TRIGONOMETRY (3).** Three lecture hours per week. Prerequisites: Math 115 and Math 120 with grades of C or better; or high school preparation including 1½ years of Algebra and one year Geometry with grades C or better. Trigonometric functions of real numbers and angles, their graphs and periodicity; reduction formulas; function of multiple angles; identities and equations; radian measure; inverse functions; logarithms; solution of triangles.

**151-152 (24a-24b) MINICOMPUTER PROGRAMMING I AND II (1½-1½).** Two lecture plus 2 lab hours per week by arrangement for seven weeks. Prerequisite: Math 120 with grade C or better, or high school preparation including 1½ years of Algebra with grade C or better.

**151**—Introduction to BASIC language, elementary programming techniques with special emphasis on interactive programs, elementary applications through BASIC programs.

**152**—Continuation of 151 with emphasis on file-handling, string manipulation and special programming techniques.

**162 (25) FORTRAN PROGRAMMING WITH AN INTRODUCTION TO NUMERICAL AND STATISTICAL METHODS (3).** Day—Two lecture and three lab

hours per week. Evening—Two lecture and one lab hour plus two lab hours by arrangement per week. Prerequisite: Math 130 with grade C or better, or high school preparation including two years of Algebra, one year of Geometry and one semester of Trigonometry with grades C or better. FORTRAN IV programming; numerical methods for approximation of roots, solution of systems of equations, Newton's approximation, descriptive statistics, matrix manipulations and simulation through the use of random numbers. Students write and test a variety of computer programs. Extra supplies may be required. (Identical to D.P. 162.)

**200 (22) ELEMENTARY PROBABILITY AND STATISTICS (4).** Day—four lecture hours per week. Evening—five lecture hours per week. Prerequisite: Math. 120 or equivalent with grade C or better, or high school preparation including 1½ years of Algebra with C or better. Treatment of use/misuse of data, measures of central tendency and dispersion, probability, sampling distributions, statistical inference, regression and correlation, contingency tables, time series analysis, index numbers.

**210 (17) INTRODUCTION OF SYMBOLIC LOGIC (3).** See Philosophy 210.

**219 (27) COLLEGE ALGEBRA WITH TRIGONOMETRY REVIEW (5).** Day—Five lecture hours per week. Evening—six lecture hours per week. Prerequisite: Math 130 with grade C or better, or high school preparation including 1½ years of algebra, one year of Geometry and one semester of Trigonometry with grades C or better. Covers the same course material as Math. 220 but includes a review of Trigonometry.

**220 (28) COLLEGE ALGEBRA (3).** Three lecture hours per week. Prerequisite: Math. 130 (21) with grade C or better, or high school preparation including 1½ years of Algebra, one year of Geometry and one semester of Trigonometry with grades C or better. Study of more advanced algebra, including such topics as theory of equations, complex numbers, logarithmic and exponential functions, vectors, matrices, binomial theorem, sequences.

**241-242 (23a-23b) APPLIED CALCULUS I AND II (5-3).** Day—Five lecture hours per week. Evening—six lecture hours per week. Prerequisites: 241— Math. 130 with grade C or better, or high school preparation including 1½ years of Algebra, one year of Geometry, and one semester of Trigonometry with grades C or better. 242—Three lecture hours per week. Prerequisite: Math. 241 with grade C or better. 241—Selected topics from analytic geometry, plus basic



techniques of both differential and integral calculus. (This sequence may not be substituted for the Math. 30 sequence for mathematics, physics or engineering majors.)

**242**—Further work in differentiation and integration, calculus of functions of several variables, and selected topics from differential equations.

**260-261-262-263 (30, 31, 32, 33) CALCULUS WITH ANALYTIC GEOMETRY (4-4-4-4).** Day—four lecture hours per week. Evening—five lecture hours per week. Prerequisites: 260—Math. 130 and 319 or 220 with grades of C or better, or high school preparation including two years of Algebra, one year of Geometry and one semester of Trigonometry with grades of C or better. 261, 262, 263—completion of the previous course in the sequence (or its equivalent) with grade C or better. A four-semester sequence in integrated calculus-analytic geometry in which the topics of analytic geometry will be treated as needed throughout the development of the calculus. Limits and the derivative with applications will be treated within the first semester of the sequence. Lists of topics to be covered each semester are available from the Math/Science Division Office.

**270 (35) LINEAR ALGEBRA (3).** Three lecture hours per week. Prerequisite: Math. 261. Vectors and matrices applied to linear equations and linear transformations; real and inner product spaces.

**275 (34) ORDINARY DIFFERENTIAL EQUATIONS (3).** Three lecture hours per week. Prerequisite: Math. 263 with grade C or better. When approved by the instructor, may be taken concurrently with Math. 263. Differential equations of first, second and higher order; simultaneous, linear, homogeneous equations; solutions by power series; numerical methods, Fourier series, Laplace transforms, and applications.

**414 (4) TECHNICAL ALGEBRA I (1-3). (Credit/No credit.)** Three hours per week—individualized instruction. An informal, intuitive, numerical approach to understanding algebra. Content chosen on the basis of its relevance to basic science and technology. Topics include signed numbers, fractions, equations, graphing, formula rearrangement and system of equations.

**415 (5) TECHNICAL ALGEBRA II (1-3). (Credit/No credit.)** Three hours per week—individualized instruction. Prerequisite: Math. 414 or equivalent. Includes radicals, radical equations, quadratic equations, fractional exponents, logarithmic and exponential formulae and semi-log and log-log graphs.

**416 (6) TECHNICAL TRIGONOMETRY (1-3). (Credit/No credit.)** Three hours per week—individualized instruction. Prerequisite: Math. 415 or equivalent. Study of right triangles and trigonometric ratios; vectors, trigonometric ratios of standard-position angles; oblique triangles; applied geometric problems; identities and interpolation; sine wave analysis; complex numbers.

**417 (7) CALCULATOR USAGE (1-3). (Credit/No credit.)** Three hours per week—individualized instruction. Prerequisites: For 1 unit—none; for 2-3 units, Math. 130 or equivalent. Hands-on course in calculator usage, principally the pocket-calculator type. Calculators are available or a student may use his own. Designed to cover the capabilities of the machines available. Among the tasks to be mastered are the fundamental operations of real numbers, evaluating selected algebraic, trigonometric, logarithmic and exponential function values and programming techniques.

**680 (48) SELECTED TOPICS IN MATHEMATICS (1-3).** Hours by arrangement. Selected topics in Mathematics not covered by regular catalog offerings. Course content and unit credit to be determined by Math/Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**811 (1) ARITHMETIC REVIEW (1-3).** Three hours per week—individualized instruction. Basic arithmetic facts and operations of whole numbers, fractions and decimals with applications. May be repeated for a total of 3 semester units.

**812 (2) ELEMENTARY ALGEBRA REVIEW (1). (Credit/No credit.)** Three hours per week—individualized instruction. Prerequisite: Elementary Algebra. A review of elementary algebra.

**813 (3) METRICS (1). (Credit/No credit.)** Three hours per week—individualized instruction. The metric system and its relationship to the English system.

## Medical Assisting

(For Program Planning and Suggested Curricula see Business—Medical Assisting)

**100 (M.A. 59) INTRODUCTION TO MEDICAL OFFICE TRAINING (3).** *Three lecture hours per week.* Duties and responsibilities of a medical assistant in a physician's office, clinic, hospital or other medical facility. Emphasis on desirable personality traits and human relationships as well as on medical ethics, specialties in the medical field and office maintenance.

**110 (M.A. 57a) BASIC MEDICAL TERMINOLOGY (3).** *Three lecture hours per week.* Development of a medical vocabulary through the study of the principles of word construction and word analysis, with emphasis on spelling and pronunciation. Medical abbreviations and symbols.

**111 (M.A. 57b) ADVANCED MEDICAL TERMINOLOGY (3).** *Three lecture hours per week.* Prerequisite: MEDA 110. Terminology in medical specialties as it relates to body structure, pathological conditions and diseases; operative terms and techniques, laboratory and radiological diagnostic procedures.

**120 (M.A. 60) CLINICAL PROCEDURES (3).** *Two lecture and three lab hours per week.* Prerequisite: Biol. 130. Examination room techniques; sterilization procedures; medical emergencies; laboratory procedures; pharmacology. (Fall only.)

**130 (M.A. 70b) MEDICAL ASSISTING REVIEW, CLINICAL (3).** *Three lecture hours per week.* Prerequisites: MEDA 110, 100 and 120 or employment as a medical assistant and/or medical secretary. Medical terminology and clinical procedures. Comprehensive review of medical terminology and the anatomical systems. Review of the clinical duties peculiar to a medical office, including sterilization techniques, laboratory and x-ray studies and physical examinations. Medical ethics.

**140 (M.A. 94) MEDICAL TRANSCRIPTION (2).** *Four lecture hours per week.* Prerequisites: Intermediate Typing or equivalent; MEDA 110 (Biology 130 recommended). Machine transcription of medical reports. (Spring only.)

**141 MEDICAL TRANSCRIPTION, ADVANCED (3-4).** *Two lecture, two lab and one hour per week by arrangement.* Prerequisites: Meda 110, 140. Meda 190

and Biol 130 are recommended. Intensive transcription of hospital-type medical reports including history and physical examinations, surgeries, discharge summaries and radiologic and nuclear medicine reports.

**150 M.A. (100) MEDICAL OFFICE PROCEDURES (3).** *Four lecture hours per week, plus 1 hour by arrangement.* Prerequisites: MEDA 110, 100. Intermediate Typing or equivalent and enrollment in or completion of one course in college English. Fundamental office procedures applied to the medical field. Medical office simulations require decision-making in setting priorities, finding information, coping with interruptions, producing under pressure. (Fall only.)

**160 (M.A. 95) MEDICAL INSURANCE PROCEDURES (2).** *Four lecture hours per week.* Prerequisites: MEDA 100, Intermediate Typing or equivalent. Blue Cross, Blue Shield, Medicare, Medi-Cal, Workmen's Compensation and other insurance programs are presented. Coding resources utilized in claims preparation. Billing and bookkeeping methods. (Fall only.)

**170 (M.A. 108) MEDICAL ASSISTING EXTERNSHIP (4).** *Two lecture hours per week plus 10 hours per week of supervised training in medical office.* Prerequisites: Completion of or enrollment in Medical Assisting 120, 140, 160, 150. Practical experience, under supervision, in a physician's office or clinic and/or hospital, with weekly seminar.

**180 (M.A. 70a) MEDICAL ASSISTING REVIEW, ADMINISTRATIVE (3).** *Three lecture hours per week.* Prerequisite: MEDA 110, 100, 160, 150 or employment as a medical assistant and/or medical secretary. Clerical office procedures. General review of administrative office duties performed in a medical office, including correspondence, transcription, insurance, telephone, basic bookkeeping, medical ethics and legal aspects.

**190 INTRODUCTION TO PHARMACOLOGY (2).** *Two lecture hours per week.* Designed for medical assistants, medical transcribers and other allied health personnel. Instruction will include recognition and identification of commonly used drugs, classification of drugs according to action, modes of administration of drugs and care and storage of drugs according to regulations of the Food and Drug Administration.

## Meteorology

**100 (1) ELEMENTARY METEOROLOGY (3).** *Three lecture hours per week.* A basic course in descriptive meteorology. It includes the atmosphere's structure, the

earth's heat budget, cloud forms and precipitation, pressure systems and wind, and air mass and frontal weather. This course leads to a better understanding of the obvious and subtle ways of the weather.

**110 (10) AVIATION WEATHER (3).** Three lecture hours per week. Prerequisite: Aero. 100. An introductory course in descriptive meteorology emphasizing applications to aviation. Designed to help the pilot appreciate good weather, recognize marginal and hazardous weather, and make intelligent decisions in flight planning. Prepares student for meteorology portion of FAA examination.

**680 (48) SELECTED TOPICS IN METEOROLOGY (1-3).** Hours by arrangement. Selected topics in Meteorology not covered by regular catalog offerings. Course content and unit credit to be determined by the Math/Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN METEOROLOGY (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Military Science

(Reserve Officers Training Corps)

**1a-1b FUNDAMENTALS OF LEADERSHIP; THE U.S. DEFENSE ESTABLISHMENT (2-2).** One lecture hour and one leadership lab bi-weekly. First year basic course. Provides orientation concerning organization, management, and leadership fundamentals in formal organizations. Role of the citizen-soldier; foundations of national power, and causes of conflict are examined. Oral reports and written requirements enhance communicative abilities.

**12a-12b MAP AND AERIAL PHOTOGRAPH READING; APPLIED LEADERSHIP AND MANAGEMENT (2-2).** One lecture hour and one leadership lab bi-weekly. Prerequisite: Military Science 1a-1b. Second year basic course. The functions, duties, and responsibilities of junior leaders; mission, organization, and composition of the basic military team; study of the basic principles of map and aerial photograph reading to

include military geography, map symbols, military grid systems, resection techniques, and use of compass. Instruction in military operations and basic tactics; continuing development of leadership through practical exercises.

## Music

The following Music courses may be taken for credit four times: Music 150, 170, 304, 320, 340, 360, 372, 402, 403, 430, 440, 445, 450, 451, 460, 470, 480, 490, and 495.

**100 (9) FUNDAMENTALS OF MUSIC (3).** Three lecture hours per week. Designed for the student who wishes to learn how to read music and perform it at sight. Recommended for students with limited musical background who wish to begin the formal study of music theory. Also recommended for education majors.

**101 (1a) MUSICIANSHIP I (3).** Three lecture hours per week. Prerequisite: Music 100 or equivalent; concurrent enrollment in Music 131. Study of notations, keys and intervals. Performance at sight of melodic and rhythmic examples. Dictation of melodic, harmonic and rhythmic examples. Fundamentals of keyboard harmony.

**102 (1b) MUSICIANSHIP II (3).** Three lecture hours per week. Prerequisite: Music 101; concurrent enrollment in Music 132. Continuation and advanced study of topics introduced in Music 101. (Nine units of Musicianship are recommended for students majoring in Music.)

**103 (2a) MUSICIANSHIP III (3).** Three lecture hours per week. Prerequisite: Music 101 and 102, or equivalent; concurrent enrollment in Music 133. Continuation of Music 101-102.

**104 (2b) MUSICIANSHIP IV (3).** Three lecture hours per week. Prerequisite: Music 103; concurrent enrollment in Music 134. Continuation of Music 103.

**131 (4a) HARMONY I (3).** Three lecture hours per week. Prerequisite: Music 100, 101 and 102 or equivalents; or concurrent enrollment. Principles of scale, mode and interval construction; Triads in first, second and third inversions; melodic and harmonic rhythm; root progressions and voice leading; seventh chords and secondary dominants; introduction to common harmonic practice through exercises, analysis and creative work.

**132 (4b) HARMONY II (3).** *Three lecture hours per week. Prerequisite: Music 131.* Continuation and advanced study of topics introduced in Music 131.

**133 (5a) HARMONY III (3).** *Three lecture hours per week. Prerequisite: Music 131 and 132; concurrent enrollment in Music 103.* Continuation of the study of tonal and formal procedures; the contextual investigations of diminished seventh, neopolitan sixth and augmented sixth chords; tonicization, modulation and sequence; introduction to Impressionism and to 20th century melody, harmony and form.

**134 (5b) HARMONY IV (3).** *Three lecture hours per week. Prerequisite: Music 133; concurrent enrollment in Music 104.* Continuation and advanced study of topics introduced in Music 133.

**150 (17) COMPOSERS WORKSHOP (2).** *Three lecture hours per week. Prerequisite: Music 131 and 132 or equivalent.* Study of compositional style from Schoenberg to the present, with particular emphasis on dodecaphonic, electronic and aleatory techniques. Performance of student works is an integral part of the course. (May be repeated for credit.)

**170 (16) IMPROVISATION (3).** *One lecture and two lab hours per week. Prerequisite: Music 131 or equivalent.* Study of improvisatory styles and techniques and the historical perspective of the practices; rhythmic, harmonic and melodic foundations; and improvisatory ensemble. (May be repeated for credit); Applicable to a major in music.

**202 (6) MUSIC LITERATURE AND APPRECIATION (3).** *Three lecture hours plus three hours required listening per week.* A survey of the music of Western Civilization, emphasizing the techniques of listening and understanding of the art. Text, illustrated lectures and directed listening in the library.

**270 (7) SURVEY OF BLACK MUSIC (3).** *Three lecture hours per week.* Chronological survey of the various styles and salient elements of the music of the Afro-American, encompassing sociological as well as musical factors. (Identical to Ethnic Studies 270.)

**275 (8) HISTORY OF JAZZ (3).** *Three lecture hours per week.* Study of jazz since 1900, with emphasis on instrumental styles; the development of jazz since 1940 and contemporary trends. (Identical to Ethnic Studies 275.)

**301 (12) PIANO I (1).** *Three class lab hours plus two individual lab hours per week.* Study in the techniques

of piano playing. Individual attention, assignments and performance in a class situation.

**302 (13) PIANO II (1).** *Three class lab hours plus two individual lab hours per week. Prerequisite: Music 301 or equivalent.* Continuation of study in the techniques of piano playing. Individual attention, assignments and performance in a class situation.

**303 (14) PIANO III (1).** *Three class lab hours plus two individual lab hours per week. Prerequisite: Music 302 or equivalent.* Continuation of study in the techniques of piano playing. Individual attention, assignments and performance in a class situation.

**304 (15) PIANO IV (1).** *Three class lab hours plus two individual lab hours per week. Prerequisite: Music 303 or equivalent.* Continuation of study in the techniques of piano playing. Individual attention, assignments and performance in a class situation.

**320 (24) STUDY OF BRASS INSTRUMENTS (1).** *Three class lab hours plus two individual lab hours per week.* Techniques of playing the instrument of the student's choice, with individual and class instruction. (May be repeated for credit.)

**340 (25) STUDY OF WOODWIND INSTRUMENTS (1).** *Three class lab hours plus two individual lab hours per week.* Technique of playing the instrument of the student's choice, with individual and class instruction. (May be repeated for credit.)

**360 (26) STRINGED INSTRUMENTS (1).** *Three class lab hours plus two individual lab hours per week.* Technique of playing the violin, viola, cello or string bass, with individual and class instruction. (May be repeated for credit.)

**371 (18a) CLASSICAL GUITAR (1).** *Three class lab hours plus two individual lab hours per week.* Study in the techniques of guitar performance and reading music to a degree which will enable the student to play accompaniments to compositions written for the guitar. Students must supply their own instruments.

**372 (18b) CLASSICAL GUITAR II (1).** *Three class lab hours plus two individual lab hours per week. Prerequisite: Music 371.* Continuation of Music 371 with emphasis on solo performances. (May be repeated for credit.)

**402 (37) SOLO VOICE I (1).** *Three class lab hours plus two individual lab hours per week.* Elementary vocal problems analyzed and corrected through exercises and songs. (May be repeated for credit.)

**403 (38) SOLO VOICE II (1).** Three class lab hours plus two individual lab hours per week. Prerequisite: Music 402 or equivalent. Advanced songs and recital performance as ability merits. (May be repeated for credit.)

**430 (23) SYMPHONIC BAND (1).** Three lecture-critique hours per week. Prerequisite: Music 320, 340, 360 as applicable, or equivalent. Demonstration of proficiency. Study and performance of music for concert band. Performance is required. Band does not perform at athletic events. (May be repeated for credit.)

**440 (21) SYMPHONY ORCHESTRA (1).** Three lecture-critique hours per week. Prerequisite: Music 320, 340, 360 as applicable, or equivalent. Demonstration of proficiency. The study and performance of orchestral literature appropriate for a large orchestra. Each semester is concerned with works differing from the previous semesters, providing a succession of new curriculum. (May be repeated for credit.)

**445 (22) CHAMBER ORCHESTRA (1).** Three lecture-critique hours per week. Prerequisite: Music 320, 340, 360 as applicable, or equivalent. Demonstration of proficiency. Study and performance of standard and contemporary literature for string and chamber ensembles. Performance is required. (May be repeated for credit.)

**450 (28) JAZZ BAND (2).** Five lecture-critique hours per week. Prerequisite: Music 451 or equivalent. Demonstration of proficiency. Advanced course which includes organization, training procedures, arranging, vocals and other phases of dance band work. Performance is required. (May be repeated for credit.)

**451 (29) JAZZ WORKSHOP (1).** Three lecture-critique hours per week. A workshop for the musician who wishes to learn jazz interpretation and styles. Ensemble experience from "Blues" to present-day jazz. (May be repeated for credit.)

**460 (27) INSTRUMENTAL ENSEMBLE (1).** Three lecture-critique hours per week. An ensemble class to provide group experience for various kinds of instruments in a variety of combinations. (May be repeated for credit.)

**470 (33) CHOIR (1-2).** Five lecture-critique hours per week (daily), or three hours per week (MWF). Prerequisite: Music 402 or the equivalent. Demonstration of proficiency. Study of performance of choral literature for accompanied and unaccompanied choir. Performance is required. (May be repeated for credit.)

**480 (34) CHAMBER CHOIR (1).** Three lecture-critique hours per week. Prerequisite: Concurrent enrollment in Music 470. Demonstration of proficiency. An advanced ensemble which specializes in the performance of choral literature appropriate for small choir. Members are selected by audition from the enrollment of the Music 470 Choir. Performance is part of the course. (May be repeated for credit.)

**490 (35) MASTERWORKS CHORALE (1).** Three lecture-critique hours per week. Prerequisite: Music 470 or equivalent. Demonstration of proficiency. The study and performance of chorale literature appropriate for a large chorus. Each semester is concerned with works differing from the previous semesters, providing a succession of new curriculum. (May be repeated for credit.)

**495 (40) MUSICAL THEATRE (1-3).** Hours by arrangement. Prerequisite: Demonstration of proficiency. Training in solo and chorus work for staging a musical production. (May be repeated for credit.)

**496 (41) MUSICAL RECITALS (½).** One lecture hour per week. A performing and listening course to provide recital experience and acquaintance with performance practices and musical styles. (Music majors are required to complete four semesters.)

**642 (47) COOPERATIVE EDUCATION (1-4). (Credit/No credit.)** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (48) SELECTED TOPICS IN MUSIC (1-3).** Hours by arrangement. Selected topics in Music not covered by regular catalog offerings. Course content and unit credit to be determined by the Fine Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Nursing

**100 (60) NURSING ASSISTANT—HOME HEALTH AIDE (8).** A 240-hour program consisting of 80 hours of theory lecture and 160 hours of practical lab experience correlated with clinical experience in acute hospitals, skilled nursing facilities and patients' homes. Designed to teach the student basic nursing skills to be able to function safely and effectively under a nurse's supervision in a health agency, extended care facility or in the home. The successful completion of this program results in a certificate as both Nursing Assistant and Home Health Aide.

### NURSING—VOCATIONAL

The courses described are open only to those students accepted in the Vocational Nursing Program (see admission requirements on Page 95). A grade of C or higher is necessary for progression in the sequence. Upon satisfactory completion, the candidate receives a certificate and is eligible to write the California Board of Vocational Nurse and Psychiatric Technician Examiners licensing examination.

**110 (51) MEDICAL/SURGICAL NURSING I (11).** Seven lecture and twelve lab hours per week. Prerequisite: Registration in Vocational Nursing curriculum and concurrent enrollment in or satisfactory completion (with grade C or better) of Biology 130 and Psychology 100. Correlation of theory and laboratory experience in chronic and subacute medical and surgical conditions of adults. Principles of mental health are included.

**120 (52) MEDICAL/SURGICAL NURSING II (13).** Five lecture and 24 lab hours per week. Prerequisite: Nursing 110, Biology 130 and Psychology 110, all with grade C or better, and concurrent enrollment in or satisfactory completion (with grade C or better) of Biology 425. Continuation of Nurs. 110 with experience in more complex medical-surgical nursing situations, including the care of the mother and newborn. The role of the vocational nurse as a member of the health team is emphasized.

**130 (53) MEDICAL/SURGICAL NURSING III (13).** Five lecture and 24 lab hours per week. Prerequisite: Vocational Nursing 120 and Biology 425 both with grade C or better. This final course provides the V.N. student with additional theory and concurrent clinical experience in complex medical/surgical conditions, including multiple assignments in a variety of health agencies. (Completion of course with grade C or better

is required for certification and eligibility for license examination.)

### NURSING—A. S. DEGREE

The courses described are open only to those students accepted in the Associate Degree Nursing Program (see admission requirements on Page 95). A grade of C or higher is necessary for progression in the sequence. Upon graduation, the candidate receives an Associate in Science degree and is eligible to write the California Board of Registered Nursing licensing examination.

**210 (1) FUNDAMENTALS OF NURSING (9).** Four lecture hours and fifteen lab hours, which includes three Skills Lab hours per week. Prerequisites: Registration in the Associate in Science Degree Nursing Program and either concurrent enrollment or satisfactory completion (grade C or better) of Biology 410 and Psychology 100. Principles and practices in the fundamentals of nursing common to all patient conditions. Common needs of normal and ill individuals are considered. Introduction to mental health, communication skills, geriatric and rehabilitation nursing are included. Correlated clinical practice with the subacute and chronically ill and Skills Lab are offered concurrently with the lectures. (Completion of this course with grade C or better waives one unit of Health Science requirement.)

**221 (2) PEDIATRIC NURSING (4½).** Five lecture hours and twelve lab hours per week for eight weeks. Prerequisites: Nursing 210, Biology 410 and Psychology 100 all with Grade C or better, and concurrent enrollment in or satisfactory completion (with grade C or better) of Biology 420 and Psychology 201. Growth and development of the child and family. The focus is on nursing care related to the adaptations to stress during infancy, childhood and adolescence. Principles of growth and development, homeostasis, nutrition and pharmacology are integrated. Aspects of mental health and human sexuality are also included. Theory and clinical experience are correlated.

**222 (2) MATERNITY NURSING (4½).** Five lecture hours and twelve lab hours per week for eight weeks. Prerequisites: Nurs. 210, Biol 410, Psych. 100, all with grade of C or better and concurrent enrollment in or satisfactory completion of Biol 420 and Psych. 201 (grade C or better). The focus is on nursing care related to the maternity cycle. Principles of growth and development, homeostasis, nutrition and pharmacology are integrated. Aspects of mental health and human sexuality are also included. Theory and clinical ex-



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perience are correlated. (Completion of Nursing 121 and Nursing 122, both with grade C or better, waives one unit of Health Science requirement.)

**231 (3) PSYCHIATRIC NURSING (5).** Five lecture hours and 15 lab hours per week for eight weeks. Prerequisites: Nursing 221 and 222, Biology 420 and Psychology 201, all with grade C or better. Focus is on psychiatric nursing theory and practice. The student will care for people with emotional illnesses in a variety of community facilities. Pharmacological, nutritional, therapeutic and rehabilitative aspects of these conditions are included. Theory and clinical experience are correlated. Growth and development are integrated.

**232 (3) ADVANCED MEDICAL/SURGICAL NURSING I (5).** Five lecture hours and 15 lab hours per week for eight weeks. Prerequisites: Nurs. 221 and 222, Biol 420 and Psych. 201, all with grade C or better. The focus is on the care of adult patients with illnesses requiring medical/surgical interventions, and preventative therapeutic, pharmacological, nutritional and rehabilitative aspects of these conditions. Principles of growth and development, mental health, homeostasis and human sexuality are correlated. Theory and clinical experience are correlated.

**240 (4) ADVANCED MEDICAL/ SURGICAL NURSING II (10).** Five lecture hours and 15 lab hours per week. Prerequisite: Nursing 231 and 232 with grade C or better. The focus is on the care of patients with acute conditions requiring medical/surgical intervention, long-term care and rehabilitation. Included are preventative, therapeutic, pharmacological and nutritional aspects of these conditions. Principles of growth and development, mental health, homeostasis and human sexuality are correlated. Experiences in critical care, leadership and legal aspects of nursing practice are included. Theory and clinical experience including afternoon rotations are correlated. (Completion of course with grade C or better is required for graduation and eligibility for licensure examination.)

**647 (47) COOPERATIVE EDUCATION (1-4).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (48) SELECTED TOPICS IN NURSING (1-3).** Hours by arrangement. Prerequisite: Nursing 5 or equivalent, or current R.N. License. Selected topics in Nursing not covered by regular catalog offerings. Course content and unit credit to be determined by the Health and Service Careers Division in relation to community-stu-

dent need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**810 (41) REVIEW—FUNDAMENTALS OF NURSING (4). (Credit/No credit.)** Four lecture hours per week. Prerequisites: Completion of Nursing 240. Review for nurses of principles and practices in the fundamentals of nursing common to all patient conditions. Common needs of normal and ill individuals are considered. Introduction to mental health, communication skills, geriatric and rehabilitation nursing are included.

**821 (42) REVIEW—PEDIATRIC NURSING (2½). (Credit/No credit.)** Five lecture hours per week for eight weeks. Prerequisites: Completion of Nursing 240 or equivalent. Review for nurses of growth and development of the child and family. The focus is on nursing care related to the adaptations of stress during infancy, childhood and adolescence. Principles of growth and development, homeostasis, nutrition and pharmacology are integrated. Aspects of mental health and human sexuality are also included.

**822 (42) REVIEW—MATERNITY NURSING (2½). (Credit/No credit.)** Five lecture hours per week for eight weeks. Prerequisites: Completion of Nursing 240 or equivalent. Review for nurses of nursing care related to the maternity cycle. Principles of growth and development, homeostasis, nutrition and pharmacology are integrated. Aspects of mental health and human sexuality are also included.

**831 (42) REVIEW—PSYCHIATRIC NURSING (2½). (Credit/No credit.)** Five lecture hours per week for eight weeks. Prerequisites: Completion of Nursing 240 or equivalent. Review for nurses on psychiatric nursing theory. Pharmacological, nutritional, therapeutic, rehabilitative aspects of emotional illnesses are included.

**832 (43) REVIEW—ADVANCED MEDICAL/SURGICAL NURSING I (2½). (Credit/No credit.)** Five lecture hours per week for eight weeks. Prerequisites: Completion of Nursing 240 or equivalent. Review for nurses in the care of adult patients with illnesses requiring medical/surgical interventions, and preventive,

therapeutic, pharmacological, nutritional and rehabilitative aspects of these conditions. Principles of growth and development; mental health, homeostasis and sexuality are correlated.

**840 (4) REVIEW—ADVANCED MEDICAL/SURGICAL NURSING III (5).** (Credit/No credit.) *Five lecture hours per week. Prerequisites: Satisfactory completion of Nursing 240 or equivalent.* Review for nurses of care of patients with acute conditions requiring medical/surgical intervention, long-term care and rehabilitation. Included are preventive, therapeutic, pharmacological and nutritional aspects of these conditions. Principles of growth and development, mental health, homeostasis and human sexuality are correlated.

**850 (46) NURSING SEMINAR (1-2) (Credit No credit.)** *Two lecture hours per week. Prerequisite: Concurrent enrollment in the Nursing Program.* Discussion of nursing theory and its application concurrent with content of Nursing 210, 221, 222, 231, 232, and 240. Will focus on study habits, test taking, developing and evaluating nursing care plans. (May be repeated three times for credit.)

## Oceanography

**100 (10) OCEANOGRAPHY (3).** *Two lecture and one recitation hour per week plus two field trips.* Introduction to marine geology, chemistry and biology. Includes the hydrologic cycle, properties of sea water and marine organisms; currents, waves, tides, coastal processes and ecology of the ocean; continental drift and sea floor spreading.

## Paleontology

**110 (1) GENERAL PALEONTOLOGY (3).** *Two lecture and two recitation hours per week, plus one weekend field trip and one-day long field trip.* Survey of the history and classification of plants and animals, methods of interpretation of the fossil record; fossils as evidence of the history of life; evolution of form and structure in plants and animals; sequence of floras and faunas in the rocks, including a brief summary of fossil men and human evolution.

## Philosophy

See also Humanities.

**100 (1) INTRODUCTION TO PHILOSOPHY (3).** *Three lecture hours per week.* An introductory survey of

philosophical questions and points of view for students not planning to major in philosophy. Problems about the nature of the world and human life and thought are discussed, including specific modern questions such as the right to die and other issues of morality and belief. Intended to help students clarify their own thinking about such questions, through learning and discussing how philosophers have dealt with them.

**101 (6a) INTRODUCTION TO SOCIAL AND POLITICAL PHILOSOPHY (3).** *Three lecture hours per week.* A course intended to help students understand some basic philosophical issues and use the critical methods of philosophy, through consideration of selected social and political theories, both ancient and modern. Differing political perspectives, including modern American democracy, are discussed and compared.

**105 (6b) INTRODUCTION TO THEORY OF KNOWLEDGE (3).** *Three lecture hours per week.* A critical study of the possible sources and limits of human knowledge; the ability of sense experience, reason, faith and intuition to provide reliable information about reality and ourselves, with primary emphasis on consciousness as the means of "knowing." In addition to studying traditional Western philosophy, the course examines recent trends in psychology, parapsychology, biofeedback, and varieties of meditation techniques.

**160 (20a) HISTORY OF PHILOSOPHY: ANCIENT/MEDIEVAL (3).** *Three lecture hours per week.* A study of Greek philosophy with emphasis on pre-Socratic philosophers, Socrates, Plato and Aristotle; philosophy of the Roman world, and the beginning of Christian philosophy in the Middle Ages.

**170 (20b) HISTORY OF PHILOSOPHY: 16th-18th CENTURIES.** *Three lecture hours per week.* A study of the thought of the Renaissance; the rise of modern science; continental rationalism in Descartes, Leibniz, Spinoza; the opposing tradition of British empiricism and the critical philosophy of Kant.

**190 (20c) CONTEMPORARY PHILOSOPHY (3).** *Three lecture hours per week.* Contemporary issues in the fields of morals, politics, religion, psychology and science will be examined with special emphasis on major philosophical positions developed in the 19th and 20th centuries. Major philosophers such as Hegel, Marx, Mill, Nietzsche, Russell, Sartre and Wittgenstein will be studied.

**200 (7) INTRODUCTION TO LOGIC (3).** *Three lecture hours per week.* Procedures for evaluating arguments as presented in advertising, campaign oratory and con-

temporary debates on major social issues will be examined. Introduction to the formal analysis of arguments and its use in such areas as computer programming.

**210 (12) INTRODUCTION TO SYMBOLIC LOGIC (3).** *Three lecture hours per week.* A study of the logical structure of language and the validity of arguments expressed symbolically. Introduction to the logic of classes and relations. Introduction to the logic of mathematics. (Identical to Math 210.)

**240 (23) INTRODUCTION TO ETHICS (3).** *Three lecture hours per week.* A study of the leading theories of moral principles and ideals, and their application to typical problems of institutional behavior, life, property, and the family. Contemporary moral issues such as the right to life, the right to die and sexual preferences and practices are discussed.

**300 (24a) INTRODUCTION TO WORLD RELIGIONS (3).** *Three lecture hours per week.* Describes and compares seven major religious traditions, as different ways in which human beings relate themselves to an ultimate or transcendent order of reality, being or power. Their basic tenets, worship and ritual practices and ethical and social institutions are analyzed and discussed from a sympathetic but neutral and objective perspective.

**320 (35) ASIAN PHILOSOPHY (3).** *Three lecture hours per week.* An introduction to the major moral, political and religious philosophies of India, China and Japan, and their approaches to problems of knowledge. Examination of major Asian philosophic traditions and their contemporary approaches to problems of man and society.

**340 (24b) INTRODUCTION TO THE PHILOSOPHY OF RELIGION (3).** *Three lecture hours per week.* An investigation of the questions relating to the existence of God, including appeals to rational arguments, revelation, miracles, authority, faith, mystical experience; the nature of God and the problem of evil; the relationship between religion and moral convictions, and between religion and science; the problem of immortality.

**395 (37) PHILOSOPHICAL THEORIES OF CONSCIOUSNESS (3).** *Three lecture hours per week.* A course aimed at providing students with the means of following the perennial injunction of philosophy: "Know Thyself." The nature of consciousness and the relation of the self to the world. A survey of some of the methods of self-awareness and meditation, and

the part played by consciousness in a variety of traditions, including Yoga, Buddhism, Sufism and Christian mysticism.

**680 (48) SELECTED TOPICS IN PHILOSOPHY (1-3).** *Hours by arrangement.* Selected topics in Philosophy not covered by regular catalog offerings. Course content and unit credit to be determined by the Social Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN PHILOSOPHY (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Physical Education

The Physical Education Division offers a wide variety of physical activities in which individual students can choose to participate in accordance with their interest and needs, and which have carry-over value for the students' leisure time, now and in future years. Instruction is provided in progressive levels of competency, offering the opportunity for specialization in a given activity. See page 62 for physical education requirements.

Courses will normally be offered for the number of units specified in this Catalog. However, units allowed for a given physical education class may be adjusted to conform with an increase or a decrease in the number of hours for which the class will be offered. Units are earned on the basis of ½ unit per class hour per semester.

### AQUATICS (AQUA)

**100 (CPE 2) BEGINNING/INTERMEDIATE SWIMMING (1).** *Two lab hours per week.* Instruction in water adjustment, treading, floating, breathing techniques, crawl, breast stroke, sidestroke, back stroke, and elementary diving; also personal water safety procedures. Class is divided by levels of ability. (Offered Summer Session only.)

**105 ADVANCED SWIMMING (1).** *Two lab hours per week. Prerequisites: Demonstration of fundamentals in*

front crawl, back crawl and breast stroke. Designed to develop proficiency in front crawl, back crawl, back-stroke, side stroke, butterfly stroke and front dive. Provides information on mouth-to-mouth resuscitation.

**109 (CPE 2) INTERMEDIATE SWIMMING AND BEGINNING WATER POLO (1).** *Two lab hours per week. Prerequisite: Ability to swim comfortably in deep water.* Instruction in the basic swimming strokes plus basic water polo fundamentals and actual competitive scrimmages with men and women competing against members of their own sex. Progressive skill development in picking up the ball in water; passing, receiving, shooting, dribbling and playing the game of water polo. Knowledge of water polo rules. For students with no previous water polo experience.

**120 (CPE 2) AQUATIC FITNESS (1½).** *Three lab hours per week. Prerequisite: Ability to swim 200 yards continuously, demonstrate the crawl stroke.* Endurance swimming is stressed, based on an interval training system. A class goal is the ability to swim one mile within a 40-minute time period.

**130 (CPE 2) DIVING (1).** *Two lab hours per week. Prerequisite: Demonstration of competency.* Open to all divers. Students will be challenged by dives suited to their level of ability. Dives will be taught from one- and three-meter boards as well as from the mini-tramp.

**201 (MPE 1) BEGINNING WATER POLO (1).** *Two lab hours per week. Prerequisite: Ability to swim 50 yards using a "head high" crawl stroke, to swim 50 yards using the breast stroke, to tread water for 4 minutes, and to tread water for 1 minute with the hands out of the water.* Progressive skill development in picking up the ball in the water, passing, receiving, shooting, dribbling and playing the game of water polo. Knowledge of water polo rules. Practical assignments involving officiating responsibilities for home contests. For students with no previous organized water polo experience.

**204 (MPE 1) INTERMEDIATE/ADVANCED WATER POLO (1½).** *Three lab hours per week. Prerequisite: Demonstration of competency.* Review of shooting skills, defensive techniques, and goal tending. Introduction to team defense and techniques utilizing the extra man. Participation in intra-class league games.

**300 (CPE 2) ADVANCED LIFE SAVING (1).** *Two lab hours per week. Prerequisite: Ability to swim 400 yards continuously, demonstration of the crawl, side and breast strokes, standing front dive; surface dive to*

*six-foot depth and swim two body lengths under water; floating required.* Progressive skill development in take-offs, approaches, carries, defensive mechanism, shallow water carries, water safety knowledge and artificial respiration.\*\*

\*\*American Red Cross Certificate is granted upon successful completion of course requirements.

**310 (CPE 2) WATER SAFETY INSTRUCTOR (1½).** *One lecture and two lab hours per week. Prerequisite: Possession of valid certification in advanced lifesaving or concurrent enrollment in life saving.* Development of effective performance in the basic swimming strokes and various life saving and water safety skills. Teaching techniques, methods and knowledge necessary to teach American Red Cross swimming and life saving courses. Certification as a Red Cross Water Safety Instructor is granted with successful completion of course requirements.

#### COMBATIVES (COMB)

**101 (CPE 2) BEGINNING JUDO (1).** *Two lab hours per week. Beginners only permitted.* Judo for the beginning student. Consideration is given to the rules, procedures, techniques of falling, unbalancing, throwing techniques, combination techniques as related to physical development. Emphasis is on judo as a sport.

**104 (CPE 2) INTERMEDIATE/ADVANCED JUDO (1).** *Two lab hours per week. Prerequisite: Demonstration of ability. Elementary Judo class or equivalent.* A continuation of skills learned in elementary judo. Advanced attacks and defenses are practiced. Consideration is given to Judo as an "art," with emphasis on maximum use of the mind and body.

**201 (CPE 2) BEGINNING KARATE (1).** *Two lab hours per week.* Orientation in the philosophy, history and physical aspects of the Tae-Kwon-Do. Fundamental kicking, blocking and striking techniques are studied. Upon completion, students will be eligible for promotion to next highest grade (yellow belt).

**302 (MPE 1) INTERMEDIATE WRESTLING (1).** *Two lab hours per week.* Introduction to intercollegiate wrestling through instruction in the rules, scoring system, and skills. Fundamental stances, takedowns, escapes, reversals, breakdowns, rides, and pinning combinations. After learning these skills, the student will be able to apply them in short periods of wrestling. More advanced skills as applied to intercollegiate wrestling. Dual competition within the class.

**305 (MPE 1) ADVANCED WRESTLING. (2).** Four lab hours per week. Recommended for Varsity Wrestling. Combination of advanced wrestling instruction in: (1) Advanced Wrestling skills; (2) Competition; (3) Circuit Training; (4) Running.

**308 (MPE 1) FREESTYLE AND COLLEGIATE WRESTLING (1).** Advanced training in wrestling skills with emphasis on competition in Freestyle and Collegiate Tournaments. Open to the general public including high school wrestlers.

#### DANCE

Descriptions of the following courses may be found on page 137 under DANCE. Students may enroll in either Dance or Physical Education courses, but not both.

- 180 (CPE) Folk/Square Dance (1)
- 360 (CPE) Movement and Body Awareness (1)
- 148 (CPE) Beginning Ballet and Modern Dance (1)
- 380 (CPE) Theatre Dance and Movement (2)
- 141 (CPE) Beginning Ballet (1)
- 143 (CPE) Intermediate Ballet (1)
- 121 (CPE) Contemporary Modern Dance I (1)
- 122 (CPE) Contemporary Modern Dance II (1)
- 130 (CPE) Jazz Dance (1)
- 411 (CPE) Dance Production I (1)
- 412 (CPE) Dance Production II (2).

#### FITNESS (FITN)

**100 (CPE 2) ADULT FITNESS (1).** Two lab hours per week. A course designed to re-acquaint the adult with exercise and to increase cardiovascular fitness. Exercise for flexibility, strength and agility; jogging for conditioning of the vascular and respiratory systems; and relaxation for release of tension.

**110 (CPE 2) ADULT CONDITIONING ACTIVITIES (1½).** Three lab hours per week. A program of exercises to increase the cardiovascular and flexibility components of physical fitness. Students may participate in one of two exercise programs: (1) exercises to music with emphasis on aerobic fitness; (2) a series of coordinated exercises designed for the stretching and flexibility components of fitness. Each program will conclude with a period of league and tournament volleyball and badminton. (Summer class meets 36 hours for one unit and will follow format No. 2 above).

**120 (CPE 2) FITNESS ACTIVITIES (1).** Two lab hours per week. Exercises ranging from mild to very active, individual fitness evaluation and all-around endurance. Designed to help the individual understand the need for the benefits of physical fitness.

**130 (CPE 2) BIODYNAMICS (1).** Two lab hours per week. Stress is placed on improvement of posture and fitness. The course offers measurement in strength, flexibility and coordination, and an evaluation of one's posture.

**150 (WPE 3) SLIM/TRIM (1).** Two lab hours per week. Designed to study, achieve and maintain long-term proper weight through an individualized program of diet and exercise. Course includes assessment of food habits, quantity and quality of food intake; aerobic, flexibility and strength exercises.

**201 (CPE 2) BEGINNING WEIGHT CONDITIONING (1-1½).** Two or three lab hours per week. A basic course of weight conditioning designed to build and strengthen the body, to increase flexibility, and to add agility; instruction in various exercises and associated safety procedures utilizing free weights and/or weight machine.

**203 (CPE 2) INTERMEDIATE WEIGHT CONDITIONING (1).** Two lab hours per week. Prerequisite: Successful completion of elementary weight conditioning or equivalent. Progressive skill and weight development in various weight conditioning exercises; opportunities to specialize in different areas of the body; development of individual programs. Free weights and weight machines are used.

**210 (CPE 2) INDIVIDUAL PROGRAMS IN WEIGHT CONDITIONING (2).** Four and one-half hours per week. Evening class meets once a week for two hours (1 unit). Prerequisite: Demonstration of competency. Vigorous weight training in an individual program of exercises designed to build specific strength with regard to each student's goal. Weight lifting machine utilized.

**211 (CPE 2) WEIGHT CONDITIONING FOR WEIGHT WATCHERS (1).** Two lab hours per week. Dynamic exercise for weight watchers. Use of exercise equipment for cosmetic improvement and developing the overall condition of the body.

**212 (CPE 2) CIRCUIT WEIGHT CONDITIONING (1½).** Three lab hours per week. Designed to promote overall physical fitness for men and women. Use of weight training machines in an exercise circuit created to develop and/or maintain muscle tone and increase flexibility. Circuit participation is preceded by stretching calisthenics and followed by light period of jogging activity.

**213 (MPE 1) WEIGHT CONDITIONING FOR BASEBALL (1).** *Two lab hours per week.* Designed to develop additional strength and flexibility through the use of circuit training machines; for those students interested in improving their proficiency in baseball.

**214 (MPE 1) WEIGHT CONDITIONING FOR CROSS COUNTRY (2).** *Four lab hours per week. Prerequisite for student athletes who will be participating as members of the Varsity Cross County team.* A weight conditioning course designed for the development of the long distance or cross-country runner.

**215 (MPE 1) WEIGHT CONDITIONING FOR TRACK (2).** *Four lab hours per week. Prerequisite for student athletes who will be participating as members of the Varsity Track team.* A Weight conditioning course designed for the individual development of the 18 different events in Track and Field.

**218 (CPE 2) CIRCUIT TRAINING (1-1½).** *Two or three lab hours per week.* Vigorous weight training exercises set up in training "stations." Individuals rotate from station to station on a specific time schedule. Emphasis is on strength and overall body conditioning. Weight machines are utilized.

**220 (MPE 1) WEIGHT CONDITIONING FOR FOOTBALL (1½).** *Three lab hours per week. Prerequisite: Varsity Football candidate.* Course is designed to teach students to use overload weight training to build bulk and strength. Students will work on major muscle groups, with emphasis on legs and upper body development.

**300 (CPE 2) JOGGING (1-2).** *Two to four lab hours per week.* Exercise periods in preparation for running and a program of jogging. Objective is to bring about an increase in cardiovascular efficiency and neuro-muscular strength through running.

**305 JOGGING AND PAR COURSE (1-1½-2).** *Two three or four lab hours per week.* Exercise periods in preparation for running and a program of jogging. Objective is to bring about an increase in cardiovascular efficiency and neuromuscular strength through jogging and use of the Par Course.

**309 EARLY BIRD FITNESS & JOGGING (½-1-1½).** *Three lab hours per week. (Open entry/Open exit within semester.)* Provides an opportunity for supervised cardiovascular workouts. A periodic testing program is administered to determine individual progress. The workout program is constantly adjusted to the advancement of the individual.

**331 (CPE 2) BEGINNING YOGA (1).** *Two lab hours per week.* Basic course in Hatha Yoga—basic postures, breathing, principles of diet, and understanding of the way Yoga unites the mind and the body through passive exercise and energy release.

**333 (CPE 2) INTERMEDIATE YOGA (1).** *Two lab hours per week.* Individualized programs designed for the student's level of physical competence in Hatha Yoga. Pranayama Yoga and Jnana Yoga are explored, as are diet, nutrition, massage and meditation.

**341 (CPE 2) BEGINNING MASSAGE (1).** *Two lab hours per week.* Basic preparations; demonstration and practice of beginning massage strokes. Principles of relaxation and breathing emphasized. Students will receive, as well as give, a massage each class period.

**343 (CPE 48) INTERMEDIATE MASSAGE (1).** *Two lab hours per week. Prerequisite: Beginning Massage.* Practice in adapting basic massage strokes to a personalized rather than mechanized style that will accommodate the needs of the receiver. Includes the use of "deep" massage to perceive and relieve chronic and acute tension, as well as an introduction to specialized body systems.

**345 ADVANCED MASSAGE (2).** *One lecture and two lab hours per week. Prerequisites: FITN 341, 343.* Instruction in advanced techniques of massage. Massage history, ethics and business practices. Introduction to the professional world of massage, including demonstration and practice in a variety of massage styles, including Swedish, Shiatsu, Esalen, Foot Reflexology and Jin Shin.

#### INDIVIDUAL SPORTS (INDV)

**101 (CPE 2) BEGINNING ARCHERY (1).** *Two lab hours per week.* Fundamentals of target archery. Individual and team competition in the Scholastic, Junior Columbia, and P.A.A. Rounds safety rules, scoring, terminology, and care and selection of equipment.

**110 (CPE 2) BACKPACKING (2).** *Ten lecture hours and two field trips. Prerequisite: Student must be at least 18 years old.* Acquaints students with necessary skills for backpacking. Lectures cover equipment, food, safety standards, and map and compass reading. Transportation is not provided. Equipment and/or equipment rental is required.

**121 (CPE 2) BEGINNING BADMINTON (1-1½).** *Two or three lab hours per week.* The rules and strategies of badminton, as well as the fundamentals of grip,



strokes, footwork and court coverage through drills and competition; testing program in the various techniques taught; tournaments in singles and doubles are held within the class period.

**123 (CPE 2) INTERMEDIATE BADMINTON (1-1½).** *Two or three lab hours per week. Prerequisite: Elementary Badminton.* Emphasis on strategy, tactics, footwork, doubles teamwork and the singles game. Tournaments in singles and doubles.

**125 (CPE 2) ADVANCED BADMINTON (1-1½).** *Two or three lab hours per week. Prerequisite: Completion of the elementary course in the top ability group.* Advanced techniques of strategy and tournament play. Tournament of different types will be played in class. Students are encouraged to enter outside tournaments.

**142 (CPE 2) BEGINNING/INTERMEDIATE BOWLING (1).** *Two lab hours per week.* An opportunity to learn the techniques of bowling or to refresh current knowledge and improve to a more advanced level. Classes will be listed by skill levels in the schedule. (Elem., Intermed., Intermed./Advan., Advanced and League.) Approx. \$2/day is required at off-campus facility. Students must provide own transportation.

**150 (CPE 2) BEGINNING/INTERMEDIATE/ADVANCED FENCING (1).** *Two lab hours per week.* Techniques and practice in form, attacks, parries, counterattacks, bouting, timing, strategy, history, safety, etiquette, rules, terminology, judging, directing, score-keeping, and tournaments.

**161 (CPE 2) BEGINNING GOLF (1).** *Two lab hours per week.* Instruction in techniques, rules, etiquette and philosophy for the beginning golfer; stance, grip, swing as associated with iron and wood shots. Outside assignments include playing at least 9 holes of golf. (Approximately \$5-\$7 per semester is required at off-campus facility for green fees, golf balls, and necessary equipment rental.)

**170 (CPE 2) HIKING (1).** *Hours by arrangement.* Basic skills, rules of trail safety, and equipment for hiking. Hikes are scheduled to nearby areas as well as one all-day hike. Students must provide their own transportation.

**210 PADDLEBALL (1½).** *Three lab hours per week.* Designed to afford students the opportunity to participate in one-wall paddleball. This class will allow students to enjoy the game, learn the rules of play, and increase agility, flexibility and, to a limited extent, cardiovascular endurance.

**220 (CPE 2) RACQUETBALL (1).** *Two lab hours per week.* Offers rules, fundamentals, techniques, and philosophy of four-wall racquetball. Provides opportunity for increased cardiovascular fitness, hand-eye coordination and overall body quickness. Class offered off-campus. Students must furnish their own transportation. Fee charged. It is recommended that participants purchase and wear safety goggles during play.

**223 INTERMEDIATE RACQUETBALL (1).** *Two lab hours per week. Prerequisite: Demonstration of ability, elementary racquetball or equivalent.* Emphasis on improving individual techniques and knowledge required to develop a racquetball game of greater skill. Tournaments in doubles and singles will be offered. Class offered off-campus. Students must furnish their own transportation. Fee charged. It is recommended that participants purchase and wear safety goggles during play.

**251 (CPE 2) BEGINNING TENNIS (1).** *Two lab hours per week.* Instruction in the fundamental skills of the service, forehand and backhand strokes; court strategy and the rules of play; testing program in all tennis skills and rules.

**253 (CPE 2) INTERMEDIATE TENNIS (1).** *Two lab hours per week. Prerequisite: Elementary tennis or demonstration of ability in forehand, backhand and service.* Emphasis on net play and doubles and singles strategy. Includes volley, lob, and smash. Singles and doubles tournaments are included.

**255 (CPE 2) ADVANCED TENNIS (1-1½).** *Two or three lab hours per week. Prerequisites: Beginning and Intermediate Tennis, or equivalent.* Advanced aspects of tennis play. Instruction in advanced strategy, philosophy, and techniques; tournament play in singles and doubles; testing program in skills, techniques, and rules.

**257 (CPE 2) TOURNAMENT TENNIS (1).** *Two lab hours per week.* Designed for the advanced tennis student who desires strong competition. Singles, doubles, mixed doubles, tournaments and ladder tournaments are offered.

**320 (CPE 2) GYMNASTICS/TUMBLING/TRAMPOLINE (1).** *Two lab hours per week.* A combination of gymnastic activities including trampoline, tumbling and the traditional gymnastic apparatus. Students may receive instruction in all areas or specialize in one area of interest.

**TEAM SPORTS (TEAM)**

**101 (MPE 1) BEGINNING BASEBALL (1).** *Two lab hours per week.* Activity in the basic skills of baseball. Rules of play and team strategies are stressed.

**105 (MPE 1) ADVANCED BASEBALL (2).** *Six lab hours per week. Prerequisite: High school baseball or equivalent.* Designed as a training class for students seeking to participate in Varsity Baseball. Practice in fundamental as well as advanced skills and techniques in baseball. Written and practical testing.

**111 (CPE 2) BEGINNING BASKETBALL (1).** *Two lab hours per week.* Basic skills, strategy, theory and practice in basketball. Skills include dribbling, shooting, guarding and passing. Also included are the theory, use, and practice of team play and strategy; Round Robin team play.

**115 (CPE 2) ADVANCED BASKETBALL (1).** *Two lab hours per week. Prerequisite: Playing experience in high school on either "B" or varsity level, or equivalent.* Advanced skills of basketball play; some continuation of basketball play; some continuation of elementary skills; advanced techniques of offensive and defensive play; Round Robin team play.

**118 (WPE 3) ADVANCED BASKETBALL FOR WOMEN (2).** *Six lab hours per week. Required class for women wishing to compete on Women's Varsity (formerly Women's Intercollegiate) team. \*Beginning of school in September until the last class in December.* Advanced skills of basketball play; development of team play.

**135 (MPE 1) ADVANCED FOOTBALL AND CONDITIONING (1½-2).** *Three or four lab hours per week. Prerequisite: Varsity football experience in high school or college, or equivalent.* Review of basic skills and introduction to advanced techniques and strategies in offensive and defensive football. Stresses conditioning necessary to play the game and for life-long health goals. Weight training included.

**140 (CPE 2) SOCCER (1).** *Two lab hours per week. Prerequisite: Demonstration of competency.* Basic fundamentals of individual play such as dribbling, heading, shooting, trapping, passing and defensive tactics; participation in game situations; testing program in all soccer skills and knowledge of rules; league play.

**145 (CPE 2) ADVANCED SOCCER (1-1½).** *Two or three lab hours per week. Prerequisite: Demonstration of competency.* Advanced soccer techniques; written and practical testing program; league play.

**151 (CPE 2) BEGINNING SOFTBALL (1).** *Two lab hours per week.* Activity in the basic skills, strategy and practice in softball. Skills include batting, catching and throwing. Also included are the rules of play and team strategy through Round Robin competition.

**158 (WPE 3) ADVANCED SOFTBALL FOR WOMEN (2).** *Four lab hours per week. Prerequisite to Women's Varsity Softball.* Designed as a training class for women interested in participating on the Women's Varsity Softball team. Advanced skills of softball play. Emphasis on team play, offense and defense.

**165 (MPE 1) ADVANCED TRACK AND FIELD (2).** *Four and one half hours per week.* Designed to increase conditioning through weight training, with emphasis on individual needs in specific track events. Running and instruction in all aspects of track and field are included. Designed for athletes planning to participate in Varsity Track & Field in the spring semester.

**171 (CPE 2) BEGINNING VOLLEYBALL (1).** *Two lab hours per week.* Fundamentals of serving, passing, setting and spiking; team competition under national and international rules of play. Strong emphasis on knowledge of rules.

**173 (CPE 2) INTERMEDIATE VOLLEYBALL (1).** *Two lab hours per week. Prerequisite: Elementary Volleyball.* Continuation of fundamental skills in tournament play. Team competition.

**175 (CPE 2) ADVANCED VOLLEYBALL (1).** *Two lab hours per week. Prerequisite: Demonstration of competency.* Volleyball play for advanced volleyball students of superior ability; continuation of the fundamental skills; emphasis on team play and advanced strategy. Tournament play is offered.

**178 (WPE 3) ADVANCED VOLLEYBALL FOR WOMEN (2).** *Four lab hours per week. Prerequisite: Knowledge, skill, and desire to try out for Varsity Volleyball team.* Designed to assist the potential varsity player in maintaining and improving physical ability and condition; developing and improving basic and advanced individual skills; and learning and understanding the concepts of offense and defense.

**200 (CPE 2) PEP SQUAD (1).** *Two lab hours per week. Prerequisite: Demonstration of competency. Must be a member of CSM Pep Squad.* Designed to teach the skills and techniques necessary for performing as a cheerleader or pompon girl. Routines are taught during scheduled meetings, and members perform at athletic contests.

### INTERCOLLEGIATE SPORTS (VARS)

These course are designed for those students who wish to compete in intercollegiate athletics and may be limited to those who demonstrate the necessary physical and mental fitness. Sufficient skill to reduce the likelihood of injury is also required. The passing of medical and physical examinations and the consent of the coach are necessary before enrollment.

Most varsity sports entail practice from 2-5 p.m. daily.

**100 (MPE 8) VARSITY BASEBALL (1-2).** Fifteen hours per week by arrangement. Prerequisite: Demonstration of competency. Intercollegiate varsity baseball competition in the Golden Gate Conference tournament and with other community colleges in the area.

**110 (MPE 5) VARSITY BASKETBALL (1-2).** Fifteen hours per week by arrangement. Prerequisite: Demonstration of competency. Intercollegiate varsity basketball competition in the Golden Gate Conference; participation in regional tournaments.

**120 (MPE 4) VARSITY CROSS COUNTRY (1-2).** Fifteen hours per week by arrangement. Prerequisite: High school track or cross country experience, or equivalent. **Men** — Cross country and distance running competition on an intercollegiate level in the Golden Gate Conference, participation in Conference meets, invitational meets, Northern California meets and State Championship for those who qualify. Racing distance is 4 miles. Candidates should also enroll in Weight Conditioning for Cross Country (2 units.)

**130 (MPE 12) VARSITY FOOTBALL (1-2).** Fifteen hours per week by arrangement. Prerequisite: Demonstration of competency. Intercollegiate varsity football competition in the Golden Gate Conference. Student athlete must be ready to start practice in late August before the fall semester begins. Student can also participate if enrolled in 12 or more units at either Skyline or Cañada College. Participation in pre-fall practice is a prerequisite for playing in the first and second games of the season.

**140 (CPE 10) VARSITY GOLF (1-2).** Fifteen hours per week by arrangement. Prerequisite: Demonstration of competency. Intercollegiate varsity golf competition in the Golden Gate Conference; participation in the Golden Gate Conference Tournament, Northern California Tournament, and State championships for those who qualify.

**170 (MPE 9) VARSITY TENNIS (1-2).** Fifteen hours per week by arrangement. Prerequisite: Demonstration of competency. Intercollegiate varsity tennis competition in the Golden Gate Conference; participation in the Conference championships, and participation in the Northern California and State championships for those who qualify.

**180 (MPE 7) VARSITY TRACK AND FIELD (1-2).** Fifteen hours per week by arrangement. Prerequisite: High school track or cross country experience, or equivalent. **Men** — Track and field competition in the Golden Gate Conference on an intercollegiate basis; participation in conference meets, invitational meets, Northern California Finals and the State meets for those who qualify. Candidates should also enroll in Weight Conditioning for Track (2 units.)

**200 (MPE 6) VARSITY WRESTLING (1-2).** Fifteen hours per week by arrangement. Prerequisite: Wrestling experience in high school or college, or demonstration of ability. Intercollegiate competition in dual matches in the Golden Gate Conference; competition in four tournaments each year including the California State Community College Tournament; instruction in advanced skills of wrestling.

**300 (WPE 22) WOMEN'S VARSITY BASKETBALL (1-2).** Fifteen hours per week minimum. Prerequisite: Demonstration of competency. Intercollegiate competition in the Golden Gate Conference, Northern California, and State Championships.

**310 (WPE 4) WOMEN'S VARSITY CROSS COUNTRY (1-2).** Fifteen hours per week by arrangement. Prerequisite: High school track or cross country experience, or equivalent. Cross-country and distance running competition on an intercollegiate level in the Golden Gate Conference; participating in conference meets, invitational meets, Northern California meets and State Championship meets for those who qualify. Racing distance is 3 miles. Candidates should also enroll in Weight Conditioning for Cross Country (2 units.)

**320 (WPE 23) WOMEN'S VARSITY SOFTBALL (1-2).** Fifteen hours per week minimum. Prerequisite: Demonstration of competency. Intercollegiate competition in the Golden Gate Conference, Northern California, and State championships.

**330 (WPE 24) WOMEN'S VARSITY TENNIS (1-2).** Fifteen hours per week minimum. Prerequisite: Demonstration of competency. Intercollegiate competition in the Golden Gate Conference, Northern California, and State Championships.

**340 (WPE 21) WOMEN'S VARSITY VOLLEYBALL (1-2).** Fifteen hours per week minimum. Prerequisite: Demonstration of competency. Intercollegiate competition in the Golden Gate Conference, Northern California, and State Championships.

**380 (WPE 7) WOMEN'S VARSITY TRACK AND FIELD (1-2).** Fifteen hours per week by arrangement. Prerequisite: High school track or cross country experience or equivalent. Track and field competition in the Golden Gate Conference on an intercollegiate basis; participation in Conference meets, invitational meets, Northern California Finals and State meets for those who qualify. Candidates should also enroll in Weight Conditioning for Track (2 units). Course is identical to Vars. 180 except lighter shot, discus and javelin are used.

#### **THEORY (P.E.)**

**100 (CPE 40) THE NATURE AND SCOPE OF PHYSICAL EDUCATION (2).** Two lecture hours per week. Detailed treatment of academic and professional requirements for physical education, development of aims, objectives and philosophies. Students are required to prepare a term paper and participate in panel discussions, symposiums and subjective testing.

**131-132 (CPE 43a-43b) SPORTS OFFICIATING I-II (2-2).** Two lecture hours per week plus lab hours by arrangement. Offered in the evenings only. A course designed for men and women Physical Education/Recreation majors. Officiating procedures for a variety of activities.

#### **200 (CPE 2) INTRAMURALS.**

Supervised intramural sports are scheduled throughout the semester on Tuesday and Thursday at 11 a.m., for one half unit of college credit on a Credit/No Credit basis. Competition in selected seasonal activities for all students. **Men** — Basketball, handball, paddleball, soccer, touch football. **Women** — Basketball, touch football, handball. **Co-ed** — Badminton, softball, table tennis, tennis, and volleyball. Sports Days: Festive occasions on which CSM students participate in a number of activities — pie-eating contest, frisbee throw, faculty-student softball, etc.

**646 (CPE 47) COOPERATIVE EDUCATION (1-4).** (Credit/No credit.) Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133).

**680 (CPE 48) SELECTED TOPICS IN PHYSICAL EDUCATION (1-3).** (Credit/No credit.) Hours by arrange-

ment. Selected topics in Physical Education not covered by regular catalog offerings. Course content and unit credit to be determined by the Physical Education Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (CPE 49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Physical Science

**100 (10) INTRODUCTION TO THE PHYSICAL SCIENCES (3).** Three lecture hours per week. Open to all students except those who are currently enrolled in or have completed a college course in physics, astronomy or chemistry. Survey of topics in physics, astronomy and chemistry. Interdisciplinary aspects of science are emphasized. (Intended for non-science majors.)

## Physics

**100 (10) DESCRIPTIVE INTRODUCTION TO PHYSICS (3).** Three lecture hours per week. Prerequisite: None; the equivalent of at least one semester of high school-level Algebra is recommended. Open to all students except those who have had or are taking Physics 210 or 220. A description with experimental demonstrations of the more important phenomena of physics.

**210-220 (2a-2b) GENERAL PHYSICS I and II (4-4).** Three lecture and three lab hours per week. Prerequisite: 210 — Elementary Algebra and Plane Geometry; 220 (2b) — Physics 210.

**210** — Mechanics, heat and sound.

**220** — Magnetism, electricity, light and modern Physics. (Designed for students majoring in some field of letters and science; required for those planning to enter Medicine, Dentistry, Pharmacy, Optometry, Agriculture or Forestry.)

**250-260-270 (4a-4b-4c) PHYSICS WITH CALCULUS I, II AND III (4-4-4).** Three lecture and three lab hours per week. Prerequisite: 250 — Math 260 and concur-

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rent enrollment in Math 261; 260 — Physics 250, Math 260 and 261 and concurrent enrollment in Math 262; 270 — same as 260. Students whose majors require only Math 241-242 should consult the instructor.

**250** — Mechanics, wave motion and special relativity.

**260** — Electricity and magnetism.

**270** — Heat, light and modern physics. (250-260-270 constitute a three-semester program designed to give the student majoring in Engineering, Physics or Chemistry a thorough foundation in the fundamentals of physics.)

**680 (48) SELECTED TOPICS IN PHYSICS (1-3).** Hours by arrangement. Selected topics in Physics not covered by regular catalog offerings. Course content and unit credit to be determined by the Math/Science Division in relation to community-student need and/or available staff. May be offered as a seminar/lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the study field. (Note: Students normally may receive credit for one Special Project per semester.)

## Political Science

**100 (1) INTRODUCTION TO POLITICAL SCIENCE (3).** Three lecture hours per week. An introductory survey designed to introduce the student to the nature of politics and to Political Science as a field of study. The scope of the course includes examination of the nature of the state, forms of government and political institutions, political theory and ideology, public law and administration, and international relations. (Fall only.)

**110 (2) CONTEMPORARY FOREIGN GOVERNMENTS (3).** Three lecture hours per week. Prerequisite: One of the following: Pol. Sc. 100, 150, 200, 210, or 220. An introduction to representative foreign political systems. A comparative analysis of how varied governments reconcile stability and change, power and responsibility, freedom and efficiency. The course stresses interrelationships of social patterns, ideology, and political institutions.

**130 (3) INTERNATIONAL RELATIONS (3).** Three lecture hours per week. An introductory survey of the nature of relations among states, focusing on the analysis

of the basic forces affecting the formulation of foreign policy and the dynamics of international politics. The scope of the course includes examination of the nation-state system, sources of national power, instruments of national policy, and the attempt to resolve international conflict by peaceful methods. (Spring only.)

**150 (5) INTRODUCTION TO POLITICAL THEORY (3).** Three lecture hours per week. Prerequisite: Successful completion of at least 12 semester units of college work. A study of classical and modern political thought designed to develop student understanding of various theoretical approaches to politics, basic political problems and proposed solutions to these problems.

**200 (25) NATIONAL, STATE AND LOCAL GOVERNMENT (5).** Five lecture hours per week. Not open to students who have had Pol. Sci. 210 or 310, or a comparable course in American or state institutions. Established primarily for students whose majors are Political Science, Pre-Law, Criminology and allied behavioral and social sciences. Introduction to the principles and problems of American government at the national, state and local levels. Intergovernmental relationships examined from a functional point of view. Major areas of emphasis are American federalism, judicial review, the political process in nation and state, civil liberties, foreign policy and the role of the citizen at all levels of government. (Satisfies the American Institutions and the California State and Local Government requirements.)

**205 (27) AMERICAN SOCIETY (5).** Five lecture hours per week. Limited to foreign students or recent immigrants. An orientation course in American society and culture, encompassing social, political and economic institutions as well as history. Particular emphasis on aspects of American life and historical development that are unique — ethnic history, patterns of voluntary association, political and non-political, educational trends, cultural characteristics. (Satisfies American Institutions and California State and Local Government requirements.)

**210 (21) AMERICAN POLITICS (3).** Three lecture hours per week. Thorough study of the Constitution, a survey of the organization and functions of the branches of the Federal government, and an examination of the dynamics of the American political process. (Satisfies the American Institutions requirement.)

**215 (30) CONTEMPORARY ISSUES IN AMERICAN POLITICS (3).** Three lecture hours per week. An ex-

ploration of current issues of import to well-informed citizens in a democracy — for example, goals and tactics of American foreign policy; civil rights; the economy; executive power and its abuses; and the politics of energy and the environment. (Satisfies the American Institutions requirement.)

**220 (22) THE AMERICAN PRESIDENCY (3).** *Three lecture hours per week.* A comparative critical analysis of the Executive branch of American government from Franklin Roosevelt's administration to the present. Variations in policy-making, political activity, administrative leadership, and Executive-Legislative branch relationships are scrutinized. (Satisfies the American Institutions requirement.)

**250 (7) CIVIL LIBERTIES AND CIVIL RIGHTS (3).** *Three lecture hours per week.* A survey and analysis of the issues and problems considered by the U.S. Supreme Court in the area of civil liberties and civil rights. The rights of racial, political and religious minorities, and of criminal defendants; the concepts of due process and equal protection of the law; the interaction of the Supreme Court with the President, Congress, political parties and interest groups. (Satisfies the American Institutions requirement.)

**255 (28) WOMEN, POLITICS AND POWER (3).** *Three lecture hours per week. Political Science 210 or 310 strongly recommended.* An examination of the changing roles of women in the political process. Emphasis is on methodology, rationale and effect on women's participation on several levels of political activity. (Satisfies the American Institutions requirement.)

**260 (9) CONTEMPORARY ETHNIC POLITICS IN THE U.S.** *Three lecture hours per week.* A survey of the political perspectives, goals, and strategies of Black, Asian, Hispanic and Native American minorities within the context of American politics. Includes analysis of traditional and alternative approaches to political ascendancy, with particular emphasis on the movements of the 1960's and 1970's. (Satisfies the American Institutions requirement.)

**300 (12) STATE AND URBAN POLITICS (3).** *Three lecture hours per week.* Examines state and urban governments in California and their interrelationship with the national government. General focus on those issues that spring from the geopolitical, cultural and economic conditions of our state's diverse and unique character. Special consideration given to an understanding of current semester's state affairs, especially to those matters of controversy that provoke public opinion, affect decision making and shape public poli-

cies. (Satisfies the California State and Local Government requirement.)

**310 (23) CALIFORNIA STATE AND LOCAL GOVERNMENT (2).** *Two lecture hours per week.* Designed to acquaint the student with the institutions and problems of state and local government in California. (Satisfies the California State and Local Government requirement.)

**520 (18) THE GOVERNMENTS AND POLITICS OF AFRICA (3).** *Three lecture hours per week.* An introduction to the study of the emergent African states, examining the political factors impinging on their decision-making processes and their geopolitical consequences. A comparative analysis of non-Western institutional structures; differences in ideological orientation; and economic interdependence in the context of contemporary world politics. (Identical to Ethnic Studies 520.)

**550 (39) INTERNATIONAL ORGANIZATION: UNITED NATIONS (3).** *Hours by arrangement.* An analytical study of the institutional structure of the United Nations as well as the operative political forces within the organization. Includes extensive research into actual issues before the United Nations. A simulation exercise is conducted through participation in the Model United Nations of the Far West. Delegates are selected during the fall semester. (May be repeated for credit.)

**590 (40) STUDENT GOVERNMENT (1).** *Attendance at scheduled meetings and individual work by arrangement.* Designed to further the educational value of experience in student government. Open to students holding elective or appointive positions in student government or on student-faculty committees. Specialized reading and research topics will be selected for individual study. (May be repeated for credit.)

**680 (48) SELECTED TOPICS IN POLITICAL SCIENCE (1-3).** *Hours by arrangement.* Selected topics in Political Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Social Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN POLITICAL SCIENCE (3).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in



the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Psychology

**100 (1a) GENERAL PSYCHOLOGY (3).** *Three lecture hours per week.* Introduction to psychology, including such topics as perception, motivation, emotion, learning and thinking, the observation of behavior, and the methods of measuring individual differences. Emphasis on experimental evidence.

**105 (1b) EXPERIMENTAL PSYCHOLOGY (3).** *Three lecture hours per week.* Prerequisite: Psych. 100 with a minimum grade of C. Recommended: Psych. 121. Philosophy and aims of scientific inquiry and how it can be applied to answer questions in psychology. Students carry out experiments to familiarize themselves with the methods discussed.

**108 (10) PSYCHOLOGY IN PRACTICE (3).** *Three lecture hours per week.* Application of psychological principles to problems of everyday living rather than the technical-scientific approach of Psych. 100. Intended for those who wish a general picture of human psychology, but who are not psychology majors. (May not be taken for credit following Psych. 100.)

**110 (4) COURTSHIP, MARRIAGE AND THE FAMILY (3).** *Three lecture hours per week.* History and development of marriage; dating; courtship; personality adjustment in marriage; parenthood; the problem of divorce, mate-selection; love; the family; anatomic, physiologic, psychologic and sociologic aspects of sex; children; religious factors; marriage as a social institution. (Identical to Sociology 110.)

**121 (7) BASIC STATISTICAL CONCEPTS (3).** *Three lecture hours per week.* Prerequisite: Math 125 or four semesters of high school level Algebra with a C average; Psych. 100 or Soci. 100 or Anth. 110. Recommended: Psych. 100. Introduction to the basic descriptive techniques and statistical inferences used in the behavioral sciences. (Spring only.)

**201 (5) CHILD DEVELOPMENT (3).** *Three lecture hours per week.* Prerequisite: Psych. 100. Consideration of perceptual, cognitive, social and emotional development extending from birth through adolescence, with an emphasis on current research.

**250 (28) PSYCHOLOGY OF WOMEN (3).** *Three lecture hours per week.* An examination of the ways in which culture influences feminine and masculine role behav-

ior within the framework of standard psychological concepts. Consideration of the demands placed on men and women by a rapidly changing society.

**300 (6) SOCIAL PSYCHOLOGY (3).** *Three lecture hours per week.* Prerequisite: Psych. 100 or Sociology 100. The study of human interaction, with emphasis on social patterning and process of perception, identity, roles and attitudes. (Identical to Sociology 300.)

**340 (39) PSYCHOLOGY OF HUMAN SEXUALITY (3).** *Three lecture hours per week.* Human sexuality considered from a psychological, physiological and cultural perspective, with a review of sex research. Topics include: reproductive process; dimensions of sexuality; sexual arousal and response; sexual inadequacies and deviations; drugs and sexuality.

**355 (14) GROUP DYNAMICS (2). (Credit/No credit.)** *Three hours of class participation per week. (May be repeated for credit.)* Interpersonal and intrapersonal exploration toward healthy personal growth in climate of maximum freedom for expression, exploration of feelings and communication. Emphasis on experience rather than theoretical and academic explanation of personal or group process.

**358 (40) GROUP FACILITATOR TRAINING (2). (Credit/No credit.)** *Two lecture hours per week.* Prerequisite: Psychology 355 or equivalent. Methods and theories of small group facilitation. Emphasis on experience and application of techniques from humanistic psychology. (May be repeated for credit.)

**400 (33) PSYCHOLOGY AND PERSONAL GROWTH (3).** *Three lecture hours per week.* Prerequisite: Psych. 100. Study of the ways people adjust to their environments. Emphasis on the ways personality develops and changes. Case illustrations and different theories of personality are presented.

**410 (34) ABNORMAL PSYCHOLOGY (3).** *Three lecture hours per week.* Elaboration on the study of abnormal behavior and personality introduced in previous courses. Topics include neuroses, psychoses and other psychological problems, along with their etiology, dynamics, principal symptoms and treatments. The relationship between theory of personality and psychotherapy is explored.

**480 (13) INTRODUCTION TO PARAPSYCHOLOGY (3).** *Three lecture hours per week.* Introduction to parapsychology including the study of extrasensory perception (ESP) and psychokinesis; reports of spontaneous phenomena and laboratory research. Emphasis

on understanding current developments, methods of investigation, and philosophical and scientific implications of psychological research.

**680 (48) SELECTED TOPICS IN PSYCHOLOGY (1-3).** *Hours by arrangement.* Selected topics in Psychology not covered by regular catalog offerings. Course content and unit credit to be determined by the Social Science Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN PSYCHOLOGY (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Reading

**802 (ENGL 66) READING: BASIC PHONIC SKILLS (3).** *Three lecture hours per week plus one to two hours per week with a tutor or in the reading laboratory.* Introduction to the study of basic speech sounds and practice in pronouncing any word met in reading. Review of dictionary symbols, diacritical marks, syllabification, and fundamental phonic generalizations. (May be repeated up to three times for credit.)

**803 (ENGL 67) READING IMPROVEMENT I (1-3).** *(Credit/No credit.) Three lecture hours plus two hours in reading lab per week. Course may be offered five hours per week for eight weeks.* Reading techniques designed to improve rate and comprehension on various types of material, fiction and nonfiction. Introduction to and practice with various machines, programmed materials and texts. Individual evaluation to discover strengths and help students deal with their weaknesses. (May be repeated once for credit.)

## Real Estate

(R.E.)

**100 (BUS. 83a) REAL ESTATE PRINCIPLES (3).** *Three lecture hours per week. Prerequisites: None. Concurrent enrollment in Bus. 810 or 115 and R.E. 105 is recommended.* Property, contracts, agency, financing, recordation, liens and encumbrances, taxes, escrows,

land description and real estate math. (Meets State requirements for the broker's examination.)

**105 (BUS. 84) REAL ESTATE VALUATION, INVESTMENT AND MANAGEMENT (3).** *Three lecture hours per week. Recommended: Concurrent enrollment in R.E. 100.* Development of California real estate principles, measuring changing value of money. Estimating: costs, depreciation, taxes, maintenance, return on investment. Accounting: rules — capital gains and losses, accelerated methods of calculating depreciation charges. (Meets the State requirements for the broker's examination.)

**110 (BUS. 85) REAL ESTATE PRACTICE (3).** *Three lecture hours per week. Prerequisite: R.E. 100, R.E. 105 or equivalent.* Comprehensive presentation of real estate brokerage skills in the State of California with emphasis on the daily activities of salesmen and brokers. (Meets the State requirements for the broker's examination.)

**121 (BUS. 87) LEGAL ASPECTS OF REAL ESTATE I (3).** *Three lecture hours per week. Prerequisite: R.E. 100, R.E. 105, R.E. 110, or concurrent enrollment, or equivalent.* The legal aspects of real estate brokerage, real estate sales, property management, real estate ownership, the management of the building of an estate and related topics, along with a study of the facts and principles of California Real Estate Law. (Meets the State requirements for the broker's examination.)

**122 (BUS. 112) LEGAL ASPECTS OF REAL ESTATE II (3).** *Three lecture hours per week. Prerequisite: R.E. 121 or equivalent.* An in-depth study of contracts, security transactions and current developments in law. Course materials will be edited selections of California appellate court decisions. This course is for the serious student who will devote the required time of approximately six hours of study each week. (Meets the State requirements for the broker's examination.)

**131 (BUS. 88) REAL ESTATE FINANCE I (3).** *Three lecture hours per week. Prerequisite: Salesman's or broker's license, or completion of R.E. 100 and 105. Completion of R.E. 110, or may be taken concurrently.* Practices, customs and laws relating to mortgage lending and the financing of real estate, with emphasis on financing private houses. (Meets the State requirements for the broker's examination.)

**132 (BUS. 113) REAL ESTATE FINANCE II (3).** *Three lecture hours per week. Prerequisite: R.E. 131, or equivalent.* Financing of commercial, industrial, and special-purpose properties. Financing mathematics, fi-

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financial analysis, construction financing, feasibility studies, creative financing, and government participation through social-action programs. (Meets the State requirements for the broker's examination.)

**141 (BUS. 134) REAL ESTATE APPRAISAL (BASIC) (3).** *Three lecture hours per week. Prerequisites: R.E. 100 and R.E. 105, or equivalent.* Basic real estate appraisal which considers the analysis of residential and commercial properties. Techniques for determination of loan, market and insurance values. (Meets the State requirements for the broker's examination.)

**143 (BUS. 135) REAL ESTATE APPRAISAL (URBAN) (3).** *Three lecture hours per week. Prerequisite: R.E. 141 or equivalent.* Advanced real estate appraisal of multi-family dwellings, apartment houses, commercial and special purpose property. (Meets the State requirements for the broker's examination.)

**145 (BUS. 136) REAL ESTATE APPRAISAL (RURAL) (3).** *Three lecture hours per week. Prerequisites: R.E. 141 or 143, or equivalent.* Advanced course in real estate appraisal of rural properties, covering three types: row crop, orchard and livestock properties. (Meets the State requirements for the broker's examination.)

**200 (BUS. 131) REAL ESTATE ECONOMICS (3).** *Three lecture hours per week. Prerequisites: R.E. 100 or R.E. 105, 110, 121, 131, 141, or equivalent.* Study of the economic aspects of real estate designed to provide a grasp of the dynamic economic conditions and related factors underlying the real estate business. (Meets the State requirements for the broker's examination.)

**205 (BUS. 140) REAL ESTATE MATHEMATICS (3).** *Three lecture hours per week.* Review of the fundamentals of mathematics as they apply to real estate practice, with problems in the area of amortization, appraising, broker's trust fund accounts, interest calculations and capitalization techniques.

**210 (BUS. 138) REAL ESTATE EXCHANGES AND TAXATION (3).** *Three lecture hours per week. Prerequisites: R.E. 100 or R.E. 105, R.E. 110, R.E. 121, R.E. 131 and R.E. 141, or equivalent.* Advanced course for real estate brokers and investors with experience in residential and commercial transactions. Primary emphasis on developing and analyzing exchange transaction, practical and technical aspects of completion, the correlation of exchanges and tax matters. (Meets the State requirements for the broker's examination.)

**215 (BUS. 139) COMMERCIAL AND INVESTMENT PROPERTY (3).** *Three lecture hours per week. Prereq-*

*uisite: R.E. 100 or R.E. 105, R.E. 110, R.E. 121, R.E. 131, and R.E. 141, or equivalent.* For licensed real estate brokers and salesmen, financing officials and investors. Emphasizes the process of selecting various properties for investment, including analyzing income, operating expenses and income tax implications. (Meets the State requirements for the broker's examination.)

**220 (BUS. 141) REAL ESTATE PROPERTY MANAGEMENT (3).** *Three lecture hours per week. Prerequisites: R.E. 110, R.E. 121, and 131, or license equivalent.* Survey course on the basic elements of investment property management. Topics include cash flow projection and valuation, merchandising, maintenance and evictions. Emphasis on apartment property.

**225 (BUS. 114) REAL ESTATE OFFICE ADMINISTRATION (3).** *Three lecture hours per week. Prerequisites: R.E. 100, or 105 and 110, 121, 131 and 141, or equivalent.* An introduction to management; research, personnel and market management decisions; transition from sales associate to manager; personnel training, counseling and compensation; future trends in the industry and their implications for management. (Meets the State requirements for the broker's examination.)

**230 (BUS. 142) REAL ESTATE INTERNSHIP (4).** *Two lecture hours and ten laboratory hours per week. Prerequisites: R.E. 100 and R.E. 105, or equivalent. R.E. 110 may be taken concurrently.* Supervised work experience and seminar. A practical application of skills and understandings learned in the academic classroom as applied to areas of specialization to be selected by the student. Intended to assist the student enrolled in the Work Experience Education program.

**235 (BUS. 111) REAL ESTATE SALESMANSHIP (3).** *Three lecture hours per week. Prerequisites: R.E. 100 and R.E. 105, or equivalent.* Specialized techniques required to promote an effective sales record. Coordinates the theoretical background required for State examinations into the area of property merchandising.

**301 (BUS. 145b) ESCROW PROCEDURES (BASIC) (3).** *Three lecture hours per week.* A basic course in the methods and techniques of escrow procedure for various types of business transactions with emphasis on real estate. (Meets the State requirements for the broker's examination.)

**303 (BUS. 145d) ESCROW PRACTICES (INTERMEDIATE) (3).** *Three lecture hours per week. Prerequisites: R.E. 301, or equivalent.* An advanced course covering more unusual and different types of escrow and evalu-

ating possible solutions. (Meets the State requirements for the broker's examination.)

**305 (BUS. 145e) ESCROW PROBLEMS (ADVANCED) (3).** *Three lecture hours per week. Prerequisites: R.E. 303, or equivalent.* Further study of more unusual and difficult types of escrows. Actual case problems are presented and discussed. Conflicts and disputes in escrow are studied. (Meets the State requirements for the broker's examination.)

**311 (BUS. 145a) TITLE EXAMINING PROCEDURES I (3).** *Three lecture hours per week.* Compiling and interpreting data from various official sources leading to the production of evidence of ownership of real estate.

**313 (BUS. 145c) TITLE EXAM PROCEDURES II (3).** *Three lecture hours per week.* Comprehensive study of map reading and easements. A study of abandonments, including vesting and effects. Procedure for examining court proceedings relating to divorce, probate, foreclosures, etc. Detailed studies of property problems.

## Recreation Education

**100 (RCED 40) INTRODUCTION TO RECREATION (2).** *Two lecture hours per week with assigned laboratory meetings. For major and minor students in Physical Education and Recreation Education.* A study of recreation as a profession, including history, principles and current trends. Analysis of the basic philosophies, skills and knowledge. Students are required to prepare a term paper, participate in panel discussions, symposiums, laboratory and field experience.

**110 (RCED 41) RECREATIONAL LEADERSHIP (3).** *Two lecture hours and two lab hours per week.* Principles of human dynamics as they apply to effective face-to-face and group leadership. Emphasis on the identification of various types of groups and the application of leadership techniques. These techniques are applied to an active laboratory situation providing the student with a realistic format for application.

## Secretarial Science

**100 (BUS. 92.1, 92.3, 92.4) BEGINNING TYPING (1-3). OPEN ENTRY/OPEN EXIT.** *Five lecture hours and one lab hour a week.* Introduction to the keyboard; an elementary course to develop correct typing techniques, including the study of simple business letters, manuscripts, and tabulated reports.

**110 (BUS. 92.5, 92.6, 92.7) INTERMEDIATE TYPING (1-3). OPEN ENTRY/OPEN EXIT.** *Five lecture hours and one lab hour a week. Prerequisites: Ability to type 30 words a minute and Beginning Typing or equivalent.* An intermediate course to improve typing skills, to develop working knowledge of business papers through training in production typing of letters, reports and tabulated material. Designed to prepare the student to meet entry-level employment standards.

**120 (BUS. 92.8, 92.9, 92.10) ADVANCED TYPING (1-3). OPEN ENTRY/OPEN EXIT.** *Five lecture hours and one lab hour a week. Prerequisites: Ability to type 40 words a minute and Intermediate Typing or equivalent.* Typing a variety of documents with specialized forms and vocabulary; instruction in the operation of the proportional-spaced typewriter. Designed to prepare the student to meet high-level employment standards.

**145 (BUS. 92.2) TYPING SKILL BUILDING (1).** *Five lecture hours and two lab hours a week for 5½ weeks by arrangement. Prerequisite: Knowledge of keyboard.* May be taken twice for credit. Speed and accuracy development individualized for all levels of competency. May be taken concurrently with all typing courses except Sec. 100.

**200 (BUS. 90.1, 90.2) BEGINNING GREGG SHORTHAND (1 or 4 or 5). (Offered in two modules).**

**Module 1=4 units.** *Five lecture hours and one lab hour a week by arrangement for eleven weeks. Prerequisites: Enrollment in or completion of Sec. 400; enrollment in or completion of three units of beginning typing or equivalent.* Foundation course in Gregg Shorthand Series 90 theory.

**Module 2=1 unit.** *Five lecture hours and one lab hour a week by arrangement for 5½ weeks. Prerequisites: Completion of basic shorthand theory; enrollment in or completion of three units of beginning typing; enrollment in or completion of Sec. 400.* Intensive dictation and theory reinforcement to achieve a minimum of 60 words a minute for three minutes.

**205 (BUS. 90P) ALPHABETIC SHORTHAND (2-3).** *Three lecture hours and two lab hours per week by arrangement for 11 weeks.* Foundation course in alphabetic shorthand—principles, dictation, transcription. Personal or vocational use.

**210 (BUS. 90.3) INTERMEDIATE SHORTHAND (1). OPEN ENTRY/OPEN EXIT.** *Five lecture hours and two lab hours a week by arrangement for 5½ weeks.* May be taken twice for credit. Prerequisites: Ability to

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take dictation at 60 words a minute for three minutes; completion of or enrollment in three units of beginning typing or equivalent; enrollment in or completion of Sec. 400 equivalent. Speed development individualized for all levels of competency. May be taken concurrently with Sec. 211.

**211 (BUS. 90.4) INTERMEDIATE SHORTHAND I (4). OPEN ENTRY/OPEN EXIT.** Six lecture hours and two lab hours a week by arrangement for eleven weeks. Prerequisites: Ability to take dictation at 60 words a minute for three minutes; enrollment in or completion of three units of intermediate typing (Sec. 110, or equivalent.) Sec. 400 or equivalent. Integration of English, typing, and shorthand skills to produce mailable copy. Individualized for all levels of competency.

**230 (BUS. 90.5) INTENSIVE SHORTHAND DICTATION AND TRANSCRIPTION (2).** Four lecture hours and one lab hour per week by arrangement. Prerequisites: Sec. 211; ability to take dictation at 70 words per minute for three minutes; Sec. 400; enrollment in or completion of three units of intermediate typing (Sec. 110) or equivalent. Production transcription with emphasis on employment standards.

**250 (BUS. 90L) LEGAL SHORTHAND AND TRANSCRIPTION (2).** Four lecture and one lab hour per week by arrangement. Prerequisites: Sec 211 or ability to take dictation at 70 words per minute. Enrollment in or completion of three units of intermediate typing or equivalent. Intensive dictation and transcription of legal correspondence, records and documents. Emphasis on shorthand speed, transcription accuracy and development of legal terminology commonly used in law offices.

**300 (BUS. 94) WORD PROCESSING MACHINE TRANSCRIPTION (2-4). OPEN ENTRY/OPEN EXIT.** Four lecture hours per week. Prerequisite: Typing speed of 40 wpm; Sec. 400. A foundation course in machine transcription to develop a student's skill in transcribing mailable copy. Instruction is audio-visual-tutorial.

**305 (BUS. 102) WORD PROCESSING-KEYBOARD (1-4). OPEN ENTRY/OPEN EXIT.** Two lecture and four lab hours minimum per week, by arrangement. Prerequisites; typing speed of 50 words per minute; Sec. 400 or equivalent; Sec. 300 or concurrent enrollment. Training on IBM Memory, Mag II, and O/S 6 word processing equipment combined with word processing concepts for purpose of meeting general job requirements in the area of word processing.

**400 (BUS. 91) BUSINESS ENGLISH AND COMMUNICATIONS I (1-3).** Three lecture hours per week. Grammar, punctuation, spelling and word usage for business.

**401 (BUS. 56) BUSINESS ENGLISH AND COMMUNICATIONS II (3).** Three lecture hours per week. Prerequisites: Beginning typing (3 units) or equivalent; Sec. 400 or successful completion of the challenge exam. The focus of this course is to identify, explain and develop the communications skills and tools that contribute to effective verbal and written communications and to their effective use. (Fall only.)

**410 (BUS. 100a) OFFICE PROCEDURES (3).** Four lecture hours per week plus one hour by arrangement. Prerequisites: Sec. 400 or successful completion of proficiency exam; completion of three units of Intermediate Typing or equivalent; Sec. 412 or equivalent; Sec. 401. Intensive course in application of skills in the wide range of activities performed in secretarial and office administration. (Spring only.)

**412 (BUS. 96) FILING AND RECORDS MANAGEMENT (2). OPEN ENTRY/OPEN EXIT.** Two lecture hours per week. Principles to be applied and procedures to be followed in setting up and using various types of filing systems; transfer, storage and retention of records.

**418 (BUS. 100b) OFFICE ADMINISTRATION (3).** Five lecture hours per week. Prerequisite: Sec. 410 or equivalent. Integration of training through simulated office experience with emphasis on techniques of administration.

**440 (BUS. 59L) INTRODUCTION TO LEGAL OFFICE TRAINING (3).** Three lecture hours per week. Enrollment in or completion of three units of beginning typing. Duties and responsibilities of a legal secretary in various law offices—general, corporate, domestic relations, probate, patent, introduction to legal records, statutes and codes, library work, filing, calendaring and bookkeeping procedures as related to a law office. (Fall only.)

**444 (BUS. 94L) LEGAL MACHINE TRANSCRIPTION (2).** Four lecture hours per week. Prerequisites: Sec. 440; typing speed of 45 words per minute. Transcription of legal documents: client, court, and general; correspondence and report.

**448 (BUS. 100L) LEGAL SECRETARIAL PROCEDURES (3).** Four lecture hours per week plus one hour by arrangement. Prerequisites: Sec. 440. Sec. 444. In-

tensive course in specialized procedures applicable to the secretarial duties in law offices. General reference is made to legal duties per se; specific instruction in legal secretarial routines and documents operative in California. (Spring only.)

**495 (BUS. 99) CERTIFIED PROFESSIONAL SECRETARY REVIEW (3).** *Three lecture hours per week.*

*Prerequisite: Demonstrated proficiency in typing and shorthand.* An intensive review course designed to prepare secretaries for the National Secretaries Association's Certified Professional Examination. Specialists review the areas of office procedures, business and public policy, economics of management, financial analysis and the mathematics of business, communications and decision making and environmental relationships.

## Social Science

**130 (10a) - 134 (10c) CALIFORNIA—AN INTERDISCIPLINARY APPROACH (2-3).** *Two or three lecture hours per week.*

A Study of California within the context of historical evolution, social patterns, geographic influence, economic development and political issues and institutions. All of the following courses satisfy the California State and Local Government requirement.

**130 (10a) Historical Geography of California**—Analysis of the interacting relationships between time and space in the evolution of the California landscape.

**131 (10b) Politics and Society in California**—Contemporary social problems examined in the context of their relationship to political institutions and processes.

**132 (10c) Economic History of California**—Investigation of the role of land and resource use, patterns and shifts in population and labor supply, and capital inflow in shaping the agricultural, industrial and commercial profile of the state.

**133 (10d) Political Economy of California**—Interaction between economic forces and political power brought to bear on the evolution and functioning of governmental services.

**134 (10e) Environmental Problems in California**—Examination of the impact of a growing population coupled with an increasingly sophisticated technology on a fixed resource base. Relationships of geographic conditions to political factors and resulting environmental problems.

**185 (20) CURRENT ISSUES FOR INTERNATIONAL STUDENTS (1) (Credit/No credit).** Analysis and interpretation of current problems of immediate interest and concern to recent arrivals to the country. The course is designed to give students of the United States a chance to discuss problems with students from other countries. (May be repeated for credit.)

**261 (33a) AFRICAN/AMERICAN CULTURE I (3).**

*Three lecture hours per week.* Discusses the relevance of African culture to the study of African-American life, including the African diaspora and its impact on contemporary African-American cultural institutions. (Identical to Ethnic Studies 261.)

**262 (33b) AFRICAN-AMERICAN CULTURE II (3).**

*Three lecture hours per week.* Explores the emergence of modern Black social movements in the United States, their leaders and philosophies, and contemporary issues including the Black consciousness movement, Pan-Africanism, counter-cultural forms of expression, and social problems. (Identical to Ethnic Studies 262.)

**648 (47) COOPERATIVE EDUCATION (1-3). (Credit/No credit).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (48) SELECTED TOPICS IN SOCIAL SCIENCE (1-3).**

*Three class hours per week.* An experimental course interdisciplinary in nature designed to explore a series of current and urgent human concerns. The theme and content of each offering will be publicized in time for registration for the semester in which the course is to be offered. See counselors for current offering. (May be repeated for credit.)

**690 (49) SPECIAL PROJECTS IN SOCIAL SCIENCE (1-2).**

*Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Sociology

**100 (1) INTRODUCTION TO SOCIOLOGY (3).** *Three lecture hours per week.* Analysis of processes of group behavior and interaction between the individual and society; personality development in different cultures



as shaped by learned customs, attitudes and values. Study of family, politico-economic and religious behavior; social movements; "mass society" and communications; community structure; social class and status, ethnic minorities, and race relations.

**105 (2) SOCIAL PROBLEMS (3).** *Three lecture hours per week.* Theories of social problems involving sociological and psychological approaches. Theoretical and descriptive studies of specific problem areas of crime and delinquency, mental illness, drug use and suicide, and the social problem areas of mass society.

**110 (4) COURTSHIP, MARRIAGE AND THE FAMILY (3).** *Three lecture hours per week.* History and development of marriage; dating; courtship; personality adjustment in marriage; parenthood; the problem of divorce; mate selection; love; the family; anatomic, physiologic, psychologic and sociologic aspects of sex; children; religious factors; marriage as a social institution. (Identical to Psych. 110.)

**141 (3) RACIAL & CULTURAL MINORITIES (3).** *Three lecture hours per week.* Sociology of inter-ethnic contact with emphasis on the experience of minorities in the United States. An examination of the dual themes of racism and equality in American society, and consideration of the patterns of prejudice and discrimination.

**150 (16) SOCIAL DYNAMICS OF PEOPLE OF COLOR (3).** *Three lecture hours per week.* Social structure and dynamics of Third World institutions, with emphasis on development and effectiveness of these institutions among Third World communities in the United States. Concentrations include the family, education, religion, and business. (Identical to Ethnic Studies 150.)

**151 (40a) PATTERNS OF PREJUDICE AND RACISM I (3).** *Three lecture hours per week.* Problems of prejudice and racism reviewed from a social-psychological perspective. Topics include how and when prejudiced attitudes are developed and their behavioral manifestations. Examples of sex, national, political, and racial prejudice and discrimination are presented. (Identical to Ethnic Studies 151.)

**152 (40b) PATTERNS OF PREJUDICE AND RACISM II (3).** *Three lecture hours per week.* Prejudice and racism analyzed according to international implications. Topics include imperialism, colonialism, nationalism, and genocide, with special concentration on contemporary issues such as those found in the Middle East, South Africa, Ireland. (Identical to Ethnic Studies 152.)

**200 (12) URBAN SOCIOLOGY (3).** *Three lecture hours per week.* *Prerequisite:* Three units of Sociology or other Social Science or Architecture courses. Urbanism and urbanization, ecology and growth, social class and racial trends, urban education, urban crime, local government and politics, planning and experimental solutions.

**300 (6) SOCIAL PSYCHOLOGY (3).** *Three lecture hours per week.* *Prerequisite:* Sociology 100 or Psychology 100. The study of human interaction, with emphasis on social patterning and processes of perception, identity, roles and attitudes. (Identical to Psych. 300).

**680 (48) SELECTED TOPICS IN SOCIOLOGY (1-3).** *Hours by arrangement.* Selected topics in Sociology not covered by regular catalog offerings. Course content and unit credit to be determined by the Social Science Division in relation to Community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS IN SOCIOLOGY (1-2).** *Hours by arrangement.* *Prerequisite:* 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Spanish

**Language Laboratory and Listening Requirement—** Students enrolled in certain courses in foreign language are required to make use of the language laboratory as prescribed by each department. Imitation, response and independent practice are integral features of the study of a foreign language at the College.

**110 (1) ELEMENTARY SPANISH (5).** *Five lecture hours and two lab hours per week.* Spanish structures and active vocabulary based on oral and written pattern drills. Conversation based on short readings containing only structures already practiced.

**111 (1a) ELEMENTARY SPANISH I (3).** *May be offered either for eight weeks on a daily lecture basis plus two lab hours, or in a semester-long program for three lecture hours and one lab hour per week.* Approximately half of the semester's work in Spanish 110 is covered in this course.

**112 (1b) ELEMENTARY SPANISH II (3).** May be offered for eight weeks on a daily lecture basis plus two lab hours, beginning at mid-term, or in a semester-long program for three lecture hours and one lab hour per week. Prerequisite: Spanish 111 or assignment on the basis of a foreign language placement test in Spanish. Approximately the second half of the semester's work in Spanish 110 is covered. (Spanish 111 and 112 are equivalent to Spanish 110.)

**120 (2) ADVANCED ELEMENTARY SPANISH (5).** Five lecture hours and two lab hours per week. Prerequisite: Completion of Spanish 111, 112 with a passing grade; or assignment by the Foreign Language Department on the basis of a foreign language placement test in Spanish. Continuation of Spanish 110. Reading of Spanish short stories to serve as a basis for classroom conversation.

**121 (2a) ADVANCED ELEMENTARY SPANISH I (3).** May be offered either for eight weeks on a daily lecture basis plus two lab hours, or in a semester-long program for three lecture hours and one lab hour per week. Prerequisite: Spanish 110 or 112 or assignment on the basis of a foreign language placement test in Spanish. Approximately half of the semester's work in Spanish 120 is covered.

**122 (2b) ADVANCED ELEMENTARY SPANISH II (3).** May be offered either for eight weeks on a daily lecture basis plus two lab hours, beginning at mid-term, or in a semester-long program for three lecture hours and one lab hour per week. Prerequisite: Spanish 121 or assignment on the basis of a foreign language placement test in Spanish. Approximately the second half of the semester's work in Spanish 120 is covered. (Spanish 121 and 122 are equivalent to Spanish 120.)

**130 (3) INTERMEDIATE SPANISH (5).** Five lecture hours and one lab hour per week. Prerequisite: Spanish 120 or 122 with a passing grade or assignment on the basis of a foreign language placement test in Spanish. Practice of conversation and composition; review of grammar; class and collateral reading of Spanish and Spanish-American literature.

**131 (3a) INTERMEDIATE SPANISH I (3).** Three lecture hours and one lab hour per week. Prerequisite: Spanish 120 or 122 with a passing grade or assignment on the basis of a foreign language placement test in Spanish. Approximately half of the semester's work in Spanish 130 is covered.

**132 (3b) INTERMEDIATE SPANISH II (3).** Three lecture hours and one lab hour per week. Prerequisite:

Spanish 131 with a passing grade or assignment on the basis of a foreign language placement test in Spanish. Approximately the second half of the semester's work in Spanish 130 is covered.

**133 SPANISH FOR NATIVE SPEAKERS (3).** Three lecture hours per week. Prerequisites: Spanish-speaking background and ability to converse in Spanish. Geared to the special needs of the Spanish-speaking student who has not had formal training in Spanish. Includes vocabulary building, spelling practice and training in grammatical principles of Standard Spanish for improved oral and written communication; class and collateral readings from Hispanic plays and short stories.

**140 (4) ADVANCED INTERMEDIATE SPANISH (3).** Three lecture hours per week. Further practice of conversation and composition based on class reading of works of modern Spanish and Latin-American authors; review of grammar; collateral reading of Spanish and Spanish-American literature.

**161 (25a) READING IN SPANISH LITERATURE I (3).** Three lecture hours per week. Prerequisite: Spanish 140. Oral and written composition class reading of works of Spanish and Spanish-American literature, extensive collateral reading of varied types of Spanish and Spanish-American literature, and review of grammar.

**162 (25b) READING IN SPANISH LITERATURE II (3).** Three lecture hours per week. Prerequisite: Spanish 161. Further oral and written composition, class reading of works of Spanish and Spanish-American literature, extensive collateral reading of varied types of Spanish and Spanish-American literature, and review of grammar.

**201 (8a) SPANISH CONVERSATION I (2).** Two lecture hours and one lab hour per week. Prerequisite: Successful completion of Spanish 130 or higher. May be taken concurrently with Spanish 130 with permission of the instructor. Practice in conversation based on Spanish customs and culture.

**202 (8b) SPANISH CONVERSATION II (2).** Two lecture hours and one lab hour per week. Prerequisite: Successful completion of Spanish 201. Further practice in conversation based on Spanish customs and culture.

**251 (29) HISPANOAMERICA CONTEMPORANEA (3).** Three lecture hours per week. Prerequisites: Spanish 140 or Spanish-speaking background. A study of contemporary Latin-American culture, its problems and

concerns, as revealed in contemporary literature; short story, drama and novel. Conducted in Spanish.

**620 (30) INDIVIDUAL READINGS (1-2).** *Conferences for oral reports. Time to be arranged. A minimum of three hours of reading per unit per week is required. Prerequisite: Spanish 162. Reading of Spanish and Latin-American representative 19th and 20th Century literature. (May be repeated for credit.)*

**680 (48) SELECTED TOPICS IN SPANISH (1-3).** *Hours by arrangement. Selected topics in Spanish not covered by regular catalog offerings. Course content and unit credit to be determined by the Director of the Language Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.*

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Director of the Language Arts Division. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)*

**801 (100a) CONVERSATIONAL SPANISH I, ELEMENTARY (2). (Credit/No credit).** *Three lecture hours per week. Intensive drill in the patterns and idioms of daily speech is supported with sufficient grammar to give flexibility in the spoken language. May be considered an excellent preparatory course for students who have not taken a foreign language before. (This course will not fulfill language requirements at California State Colleges or at the University of California.)*

When student demand is light, Spanish 802, 803, and 804 may be offered as 1.5 hour modules.

**802 (100b) CONVERSATIONAL SPANISH II, ADVANCED ELEMENTARY (2). (Credit/No credit).** *Three lecture hours per week. Prerequisite: Spanish 801 or equivalent. Further work in conversation following the model of Spanish 801. (This course will not fulfill language requirements at California State Colleges or at the University of California.)*

**803 (100c) CONVERSATIONAL SPANISH III, INTERMEDIATE (2). (Credit/No credit).** *Three lecture hours per week. Prerequisite: Spanish 803 or equivalent. More advanced work in conversation following the model of Spanish 803. (This course will not fulfill the*

language requirements at California State Colleges or at the University of California.)

**804 (100d) CONVERSATIONAL SPANISH IV, ADVANCED INTERMEDIATE (2).** *Three lecture hours per week. Prerequisite: Spanish 803 or equivalent. Further advanced work in conversation following the model of Spanish 803. (This course will not fulfill the language requirements at California State Colleges or at the University of California.)*

## Speech

The speech program consists of courses in public speaking, interpersonal communication, and oral interpretation of literature. The English requirement may be partially satisfied by 3 units of Speech 100 or Speech 120.

**100 (1a) FUNDAMENTALS OF SPEECH AND PERSUASION (3).** *Three lecture hours per week. Practice in delivering extemporaneous speeches; study of basic principles of effective communication; techniques of organizing and outlining; structure and content of basic speech types; development of critical listening; analysis and evaluation of speeches.*

**111 (2a) ORAL INTERPRETATION I (3).** *Three lecture hours per week. Oral Reading of different forms of literature (poetry, short story, drama); analysis of meaning; analysis of voice quality; enunciation, pronunciation and expressiveness; performances for audiences and recording.*

**112 (2b) ORAL INTERPRETATION II (3).** *Three lecture hours per week. Prerequisite: Speech 111. Continuation of oral reading of different forms of literature (poetry, short story, drama); analysis of meaning; analysis of voice quality; enunciation, pronunciation and expressiveness; performances for audiences and recording.*

**120 (10) INTERPERSONAL COMMUNICATION (3).** *Three lecture hours per week. Interpersonal communication, rational dialogue and cooperative analysis of communicative events. Provides for study of communicative interactions, the symbolic process, reasoning and advocacy, and the effects of communication on man and society.*

**130 (33) VOICE AND ARTICULATION (3).** *Three lecture hours per week. Exploration of various modes of communicating ideas, emotions and values through a*

meaningful use of the voice. Lessons in vocal variety, expressiveness, resonance, articulation and pronunciation.

**680 (48) SELECTED TOPICS IN SPEECH (1-3).** *Hours by arrangement.* Selected topics in Speech not covered by regular catalog offerings. Course content and unit credit to be determined by the Language Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement.* Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Language Arts Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**811 (57a) SPEECH FOR NON-NATIVE SPEAKERS I (3).** *Three lecture hours per week.* Practice in pronunciation and diction, usage; extemporaneous speaking.

**812 (57b) SPEECH FOR NON-NATIVE SPEAKERS II (3).** *Three lecture hours per week.* Continued practice in pronunciation and diction, usage; extemporaneous speaking.

**825 (62) BASIC COMMUNICATION (3).** *Three lecture hours per week.* Understanding the nature of communication through frequent exercises in interpersonal communication, extemporaneous speaking, and correlation between speaking and writing well. Emphasis is on individual needs and abilities in meeting situations in daily life: at home, at work, at college.

## Technical Art/Graphics

Extra supplies may be required in all Technical Art/Graphics courses.

**201-202 (52a-52b) TECHNICAL ILLUSTRATION I AND II (6-6).** *Three lecture and nine laboratory hours per week.* Prerequisites: 201—concurrent enrollment in T.A.G. 210; 202—201.

**201**—Basic practices and procedures used in technical drawing with emphasis on ink line techniques and the systems of projection used in technical illustration.

**202**—Working from sketches, blueprints, photographs, and objects, students prepare technical illustrations and develop a professional portfolio.

**210 (54) GRAPHIC DESIGN (4).** *Two lecture and six laboratory hours per week.* Prerequisite: Concurrent enrollment in T.A.G. 201. Development of the creative approach to graphic design in technical art. Application of various systems of drawing and design principles to practical graphic problems, which range from simple one-sheet layouts to complete color presentations.

**220 (55) VISUAL PRESENTATION (4).** *Two lecture and six laboratory hours per week.* Prerequisite: Concurrent enrollment in T.A.G. 202. Application of the student's creative ability and drawing skills to the development of visual presentations. Emphasis on charts, graphs, and transparencies for the overhead projector and 35mm slides. Each student will prepare and present before his class, a sequence of visuals on a designated subject.

**300 (63) REPRODUCTION PROCESSES (2).** *One lecture and three laboratory hours per week.* Prerequisite: T.A.G. 201. Study of the basic practices and procedures used in industry to reproduce technical art and publications. Emphasis will be on the offset printing process. Instruction on stencil, mimeo, diazo and convenience copiers will be included.

**310 (64) INDUSTRIAL DESIGN (4).** *Two lecture and six laboratory hours per week.* Prerequisites: T.A.G. 201, 202. Introduction to the design sequence. Execution of concept drawings and models involved in producing an industrial design. Laboratory experience in idea interpretation and finished presentation drawings.

**351-352 (65a-65b) PHOTO LITHOGRAPHY I AND II (2-4).** 351—*One lecture and three laboratory hours per week;* 352—*Two lecture and six laboratory hours per week.* Prerequisites: 351—T.A.G. 300; 352—T.A.G. 351. 351—Designing original, continuous tone camera-ready art work and reproducing the subject of the offset method on metal plates.

352—Planning multi-color camera-ready art work and reproducing the subject on high-production offset equipment with emphasis on finishing procedures.

**400 (66) ADVANCED PROJECT (1).** *Three lab hours per week.* Prerequisites: Completion of three semesters of T.A.G. curriculum. Students will initiate, develop and complete substantial individual projects in consultation and under the direction of the instructor. Emphasis on initiative, innovation and perseverance in the completion of these projects.

**680 (48) SELECTED TOPICS IN TECHNICAL ART/GRAPHICS (1-3).** *Hours by arrangement.* Selected top-

## 200 Description of Courses (continued)

ics in Technical Art/Graphics not covered by regular catalog offerings. Course content and unit credit to be determined by the Technology Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**710-714 GRAPHIC COMMUNICATIONS (1½ each).** *Two lecture and three lab hours per week for eight weeks. No prerequisite for any course.* Self-paced graphic communication classes are designed to allow students to study basic skill areas which are repeated at progressively higher levels of competency. The cores are intensifications of informational blocks and skill areas.

**710**—Core A—Design; B—Paste-up; C—Composition and photo conversion.

**711**—Core B—Paste-up; C—Composition and photo conversion; D—Plate making and stripping.

**712**—Core C—Composition and photo conversion; D—Plate making and stripping.

**713**—Core D—Plate making and stripping; E—Press operation; F—Bindery

**714**—Cores A, B, C, D, E, and F.

**715 GRAPHIC ARTS FOR BUSINESS (1½).** *Three lecture hours per week.* A study of the concepts needed by business persons to communicate with graphic arts professionals. Topics covered show the graphic arts process, from concept to printed material; lettering, typography, photography, illustration, color separation, plate making, paper, printing and bindery operations.

## Technology

**100 (71) SCIENCE FOR TECHNICIANS (3).** *Three lecture hours per week.* Study of applied physics phenomena as related to simple devices including forces, stress, moments acceleration, velocity, friction, energy and basic thermodynamics.

**110 (72) INDUSTRIAL MATERIALS (2).** *Two lecture hours per week. Recommended: Concurrent enroll-*

*ment in Tech.* **120.** Study of metals common to industry, basic mining techniques, structures, physical and chemical properties and uses; lattice structure, alloy systems, mechanical tests and characteristics of strength, elasticity, ductility, malleability, heat treatment and surface coatings.

**120 (74) INDUSTRIAL MATERIALS AND PROCESSES (3).** *Three lecture hours per week.* The study of metals common to industry and related industrial manufacturing processes. This includes the removing, shaping and joining of metals as well as the processing of plastics, rubber, glass and some exotic materials currently used in local industries.

**200 (76) MACHINE SHOP FOR TECHNOLOGY (2).** *One lecture and three lab hours per week.* A survey course for the technology student who requires a generalized experience in Machine Tools. Subjects covered: bench work, measurement, threads, cutting tools, lathe, mill, grinding, saws and others. (Extra supplies may be required.)

**649 (47) COOPERATIVE EDUCATION (1-4).** **(Credit/No credit).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133.)

**680 (48) SELECTED TOPICS IN TECHNOLOGY (1-3).** *Hours by arrangement.* Selected topics in Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Technology Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Telecommunications

**110 (51) INTRODUCTION TO BROADCASTING (3).** *Three lecture hours per week.* Introduction to the radio and television broadcasting industry: its nature, organization, history, operation, regulation, programming and business procedure.

**115 (66) BROADCAST ANNOUNCING (3).** *Three lecture hours per week.* Introduction to the basics of announcing skills, effective speaking and critical listening. Practice in analysis and evaluation of speeches, reading typical radio copy, speaking ad lib. Announcing and microphone techniques, developed through regular use of the studio facilities.

**131 (52a) RADIO STUDIO TECHNIQUES I (3).** *One lecture hour and six lab hours per week by arrangement. Prerequisite: Concurrent enrollment in Tele. 190 or valid third-class license with broadcast endorsement.* Study of the basic practices and procedures in radio broadcasting. The proper use of microphones, operation of audio mixing consoles, tape recorders and other common broadcast equipment, with emphasis on combo- and engineering-announcer types of programs.

**132 (52b) RADIO STUDIO TECHNIQUES II (3).** *One lecture hour and six lab hours per week by arrangement. Prerequisite: Tele. 131, plus demonstration of acceptable operational ability; valid third-class license.* Continuation of Tele. 131. Advanced students may operate the radio broadcast station KCSM-FM as part of their laboratory assignment.

**135 (53) ADVANCED RADIO OPERATIONS (3).** *One lecture hour and six lab hours per week by arrangement. Prerequisite: Tele. 132 or equivalent, plus demonstration of operational ability.* Instruction in the area of radio broadcast production/operations, including assuming responsibility for remote broadcasts, recording out-of-studio activities and events, compiling and producing weekly station promotional materials and assisting students in Telecommunications 195 in producing weekly programs.

**190 (65) COMMERCIAL LICENSE (3).** *Three lecture and three lab hours per week.* Communication procedures, regulations, and electronic theory in the area outlined by the Federal Communications Commission study guide, with attainment of the first- or second-class commercial telephone license as the final goal. (May be repeated for credit.)

**192 (68) BROADCAST TIME SALES (3).** *Three lecture hours per week.* Introductory course acquaints the student with fundamentals of time sales, its significance to the station and other departments, its relationship to clients and agencies. Knowledge of all promotional materials.

**194 (71) RADIO AND TELEVISION NEWS EDITING AND WRITING (3).** *Three lecture hours per week.* Wire copy, rewriting, oral writing style, putting the

newscast together for air, good taste in reporting, libel and slander laws, use of the tape recorder and the "beeper" telephone and writing for still pictures and films.

**195 (67) PROJECTS IN RADIO (3).** *One lecture hour and six lab hours per week to be arranged. Prerequisite: Tele. 115 or equivalent, plus demonstration of operational ability.* Instruction in the area of broadcast production, with major emphasis on researching a given subject or area, producing a series of half-hour or quarter-hour programs on the subject or area. Particular emphasis is placed on writing and the final vocal delivery involved in the series. Programs may be aired on KCSM-FM.

**231 (60a) TELEVISION STUDIO TECHNIQUES I (3).** *One lecture hour and six lab hours per week.* Study of the equipment used in a television studio, with emphasis on lighting, camera operation, audio control, video mixing and production work.

**232 (60b) TELEVISION STUDIO TECHNIQUES II (3).** *One lecture hour and six lab hours per week.* Continuation of Tele. 231. Operation of studio equipment with additional training in producing, directing and writing. Designed to improve proficiency on video equipment.

**241 (61a) PROJECTS IN TELEVISION I (3).** *One lecture hour and six lab hours per week by arrangement. Prerequisites: Tele. 231 and 232 or 301 and 302. Students must pass proficiency test on equipment, terminology and manipulative skills.* Introduction to television production with supervised activity in the planning of program material and program production. Students assist in the operation of KCSM-TV as part of the laboratory assignment.

**242 (61b) PROJECTS IN TELEVISION II (3).** *One lecture hour and six lab hours per week by arrangement. Prerequisites: Tele. 231 and 232 or 301 and 302.* Study of television operations and production with emphasis on the total station function. KCSM-TV laboratory assignments continued.

**243 (61c) PROJECTS IN TELEVISION III (3).** *One lecture hour and six lab hours per week by arrangement. Prerequisites: Tele. 231 and 232 or 301 and 302.* Advanced activity in television operations and production. Programs suitable for televising are produced for KCSM-TV.

**301 (101a) RADIO AND TELEVISION TECHNICAL OPERATIONS I (3).** *Two lecture hours and five lab hours per week.* Construction, installation and mainte-



## 202 Description of Courses (continued)

nance of equipment used in KCSM-FM and KCSM-TV and related studio equipment, including lighting, audio and video console equipment.

**302 (101b) RADIO AND TELEVISION TECHNICAL OPERATIONS II (3).** *Two lecture and five lab hours per week.* Advanced instruction in the subjects introduced in Tele. 301, with additional emphasis on intercommunications equipment, video tape recorders, and FM and TV transmitters.

**642 (47) COOPERATIVE EDUCATION (1-4). (Credit/No credit).** Work experience in a field related to a career goal, supplemented by individual counseling from an instructor-coordinator. (See Page 133).

**680 (48) SELECTED TOPICS IN TELECOMMUNICATIONS (1-3).** *Hours by arrangement.* Selected topics in Telecommunications not covered by regular catalog offerings. Course content and unit credit to be determined by the Fine Arts Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** *Hours by arrangement. Prerequisite: 3.0 GPA in subject field.* Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

## Tutoring

**896 (96) TUTORIALS (1-2). (Guid. 96) (Credit/No credit.)** *A minimum of 40 hours' work for each unit of credit.* Individual tutorial assistance or small group work with a tutor to fulfill the objectives of a student's course work in progress.

**897 (97) TUTORING PRACTICUM (1 unit per 8 weeks). (Guid. 97) (Credit/No credit.)** *Ten lab hours per week for eight weeks. Prerequisite: G.P.A. 3.0 in subject the student wishes to tutor.* For students with demonstrated academic ability who wish to tutor individuals or small groups under staff supervision.

**898 (98) TUTOR TRAINING (1 unit per 8 weeks). (Guid. 98) (Credit/No credit.)** *Two lecture and two lab hours per week for eight weeks. Prerequisite: Minimum G.P.A. of 3.00 in subject which the student*

*wishes to tutor and demonstration of competency.* Orientation and training course for those conducting individual and small group tutoring in the CSM Learning Center. Introduction to group techniques and programmed materials. (May be repeated for credit.)

**899 (99) STUDY SKILLS (2). (Credit/No credit.)** *Five lecture hours per week.* Development of college-level reading and study skills, individualized instruction, group projects which enable the student to become more proficient in information acquisition and the learning process.

## Trade and Industrial

**680 (48) SELECTED TOPICS IN TRADE AND INDUSTRY (1-3).** *Hours by arrangement.* Selected topics in Trade and Industry not covered by regular catalog offerings. Course content and unit credit to be determined by the Technology Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture, or lecture/laboratory class.

**701-703 (71a-71b) MACHINIST APPRENTICESHIP THEORY I (1-1).** *One lecture hour per week.*

**702-704 (71aL-71bL) MACHINIST APPRENTICESHIP LAB I (1-1).** *Three lab hours per week.*

**705-707 (72a-72b) MACHINIST APPRENTICESHIP THEORY II (1-1).** *One lecture hour per week.*

**706-708 (72aL-72bL) MACHINIST APPRENTICESHIP LAB II (1-1).** *Three lab hours per week.*

**711-713 (73a-73b) MACHINIST APPRENTICESHIP THEORY III (1-1).** *One lecture hour per week.*

**712-714 (73aL-73bL) MACHINIST APPRENTICESHIP LAB III (1-1).** *Three lab hours per week.*

**715-717 (74a-74b) MACHINIST APPRENTICESHIP THEORY IV (1-1).** *Three lab hours per week.*

**716-718 (74aL-74bL) MACHINIST APPRENTICESHIP LAB IV (1-1).** *Three lab hours per week.*

**721 CARPENTRY APPRENTICESHIP I (1).** *Four lab hours per week.*

**722 CARPENTRY APPRENTICESHIP II (1).** *Four lab hours per week.*

**723 CARPENTRY APPRENTICESHIP III (1).** *Four lab hours per week.*

**724 CARPENTRY APPRENTICESHIP IV (1).** *Four lab hours per week.*

**725 CARPENTRY APPRENTICESHIP V (1).** Four lab hours per week.

**726 CARPENTRY APPRENTICESHIP VI (1).** Four lab hours per week.

**727 CARPENTRY APPRENTICESHIP VII (1).** Four lab hours per week.

**728 CARPENTRY APPRENTICESHIP VIII (1).** Four lab hours per week.

**740 (62) CONTRACTOR'S LICENSE AND LAW (3).** Prerequisite: Experience in the construction field. An introduction to the legal requirements for a contractor's license and a study of his/her obligations to clients.

The following courses are designed for indentured apprentices.

**751 ELECTRICAL APPRENTICESHIP I (2½).** Four lab hours per week.

**752 ELECTRICAL APPRENTICESHIP II (2½).** Four lab hours per week.

**753 ELECTRICAL APPRENTICESHIP III (2½).** Four lab hours per week.

**754 ELECTRICAL APPRENTICESHIP IV (2½).** Four lab hours per week.

**761 PLUMBING APPRENTICESHIP I (3½).** Five lab hours per week.

**762 PLUMBING APPRENTICESHIP II (3½).** Five lab hours per week.

**763 PLUMBING APPRENTICESHIP III (3½).** Five lab hours per week.

**764 PLUMBING APPRENTICESHIP IV (3½).** Five lab hours per week.

**765 PLUMBING APPRENTICESHIP V (3½).** Five lab hours per week.

**766 PLUMBING APPRENTICESHIP VI (3½).** Five lab hours per week.

**767 PLUMBING APPRENTICESHIP VII (3½).** Five lab hours per week.

**768 PLUMBING APPRENTICESHIP VIII (3½).** Five lab hours per week.

**769 PLUMBING APPRENTICESHIP IX (3½).** Five lab hours per week.

**770 PLUMBING APPRENTICESHIP X (3½).** Five lab hours per week.

**771 REFRIGERATION I (3½).** Five lab hours per week.

**772 REFRIGERATION II (3½).** Five lab hours per week.

**781 SHEET METAL APPRENTICESHIP I (2½).** Four lab hours per week.

**782 SHEET METAL APPRENTICESHIP II (2½).** Four lab hours per week.

**783 SHEET METAL APPRENTICESHIP III (2½).** Four lab hours per week.

**784 SHEET METAL APPRENTICESHIP IV (2½).** Four lab hours per week.

**785 SHEET METAL APPRENTICESHIP V (2½).** Four lab hours per week.

**786 SHEET METAL APPRENTICESHIP VI (2½).** Four lab hours per week.

**787 SHEET METAL APPRENTICESHIP VII (2½).** Four lab hours per week.

**788 SHEET METAL APPRENTICESHIP VIII (2½).** Four lab hours per week.

**790 SHEET METAL WELDING (½).** One and a half lab hours per week.

## Welding Technology

**100 (51) APPLIED WELDING MATHEMATICS (3).** Three lecture hours per week. Areas, volumes, fundamentals of algebra, calculation of irregular areas and volumes, metric conversions.

**110 (52a) ELEMENTARY WELDING THEORY I (4).** Four lecture hours per week. Prerequisite: Concurrent enrollment in W.T. 111. Introduction to gas welding of ferrous and non-ferrous metals, brazing and soldering. Instruction on the theory of flamecutting, non-destructive testing, introduction to metallurgy, and blueprint reading for welding.

**111 (52a) ELEMENTARY WELDING PRACTICE I (4).** Four three-hour lab periods per week. Prerequisite: Concurrent enrollment in W.T. 110. Practical experience in gas and conventional arc welding of ferrous and non-ferrous metals, brazing and soldering. Lectures and demonstrations on non-destructive testing. (Extra supplies may be required.)

**120 (52b) ELEMENTARY WELDING THEORY II (4).** Four lecture hours per week. Prerequisite: W.T. 110.

204 Description of Courses (continued)

Introduction to conventional arc welding of steel, stainless steel and TIG (GTAW) welding of aluminum. Study of metallurgy and blueprint reading for welders.

**121 (52lb) ELEMENTARY WELDING PRACTICE II (4).** Four three-hour lab periods per week. Prerequisite: W.T. 111. Advanced experience in conventional arc welding of steel in the flat, vertical and overhead positions. Introduction to manual TIG (GTAW) welding of aluminum. Extra supplies may be required.

**210 (62a) ADVANCED WELDING THEORY I (3).** Three lecture hours per week. Prerequisite: W.T. 110-120. TIG (GTAW), MIG (GMAW) welding with emphasis on carbon steel, alloy steel, and stainless steel. Advanced problems in all phases of welding. Study in the theory of metallurgy and heat treating as it applies to welding technology.

**211 (62a) ADVANCED WELDING PRACTICE I (5).** Fifteen lab hours per week. Prerequisite: W.T. 111 and 121, concurrent enrollment in W.T. 210. Practical experience in TIG (GTAW), MIG (GMAW), and low hydrogen arc welding with emphasis on steel, stainless steel and aluminum. Extra supplies may be required.

**220 (62b) ADVANCED WELDING THEORY II (3).** Three lecture hours per week. Prerequisite: W.T. 210. Theory of MIG (GMAW) welding, pulsed MIG (GMAW) and TIG (GTAW) welding, electron beam welding, electro-slag welding, pipe study of the A.W.S. Structural Code and A.S.M.E. Boiler Code. Study of welding symbols as they apply to blueprints.

**221 (62b) ADVANCED WELDING PRACTICE II (5).** Fifteen lab hours per week. Prerequisite: W.T. 211. Practical experience in the welding of exotic metals, flame spraying, pulsed TIG (GTAW), pipe and MIG (GMAW) welding. Practical experience in job estimation and production welding techniques as well as maintenance welding techniques. Instruction in the application of manipulative skills required in metal

fabrication processes: hand and power shearing, punching, forming, mechanical fastening and sheet metal layout. Extra supplies may be required.

**300 (75) WELDING FOR TECHNOLOGY (2).** One lecture and one three-hour lab per week. Prerequisite: None. A related course of instruction designed to assist the student who is not a welding major in understanding the theories of oxyacetylene, bronze, conventional shielded metal arc, low hydrogen shielded metal arc, resistance welding and silver brazing with emphasis on associated equipment and supplies. (Extra supplies may be required.)

**680 (48) SELECTED TOPICS IN WELDING TECHNOLOGY (1-3).** Hours by arrangement. Selected topics in Welding Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Technology Division in relation to community-student need and/or available staff. May be offered as a seminar, lecture or lecture/laboratory class.

**690 (49) SPECIAL PROJECTS (1-2).** Hours by arrangement. Prerequisite: 3.0 GPA in subject field. Independent study in a specific field or topic, directed by an instructor and supervised by the Division Director. Students are eligible to request approval of a Special Project only after successfully completing at least two college-level courses in the subject field. (Note: Students normally may receive credit for only one Special Project per semester.)

**700 (103) TIG WELDING TECHNOLOGY (4).** Two lecture and six lab hours per week. Prerequisite: W.T. 300, previous course in welding or equivalent. Practical experience in welding of aluminum, steel, and stainless steel. The types of weldments made are corner, fillet and butt. Study of TIG (GTAW) welding aluminum, steel and stainless steel, basic metallurgy and welding symbols as they apply to blueprints.



*Mousetrap Car Race  
See story on following page*





## TECHNOLOGY

Each year drafting instructors Dennis Stack and Stanley Scott challenge their first year students to build cars for competition powered only by mousetraps. Some of the strange-looking devices travel amazingly long distances. One year a model went out the door of the student cafeteria, site of the contest, still charged, and would have made it to the campus swimming pool if it had not hit an abutment.

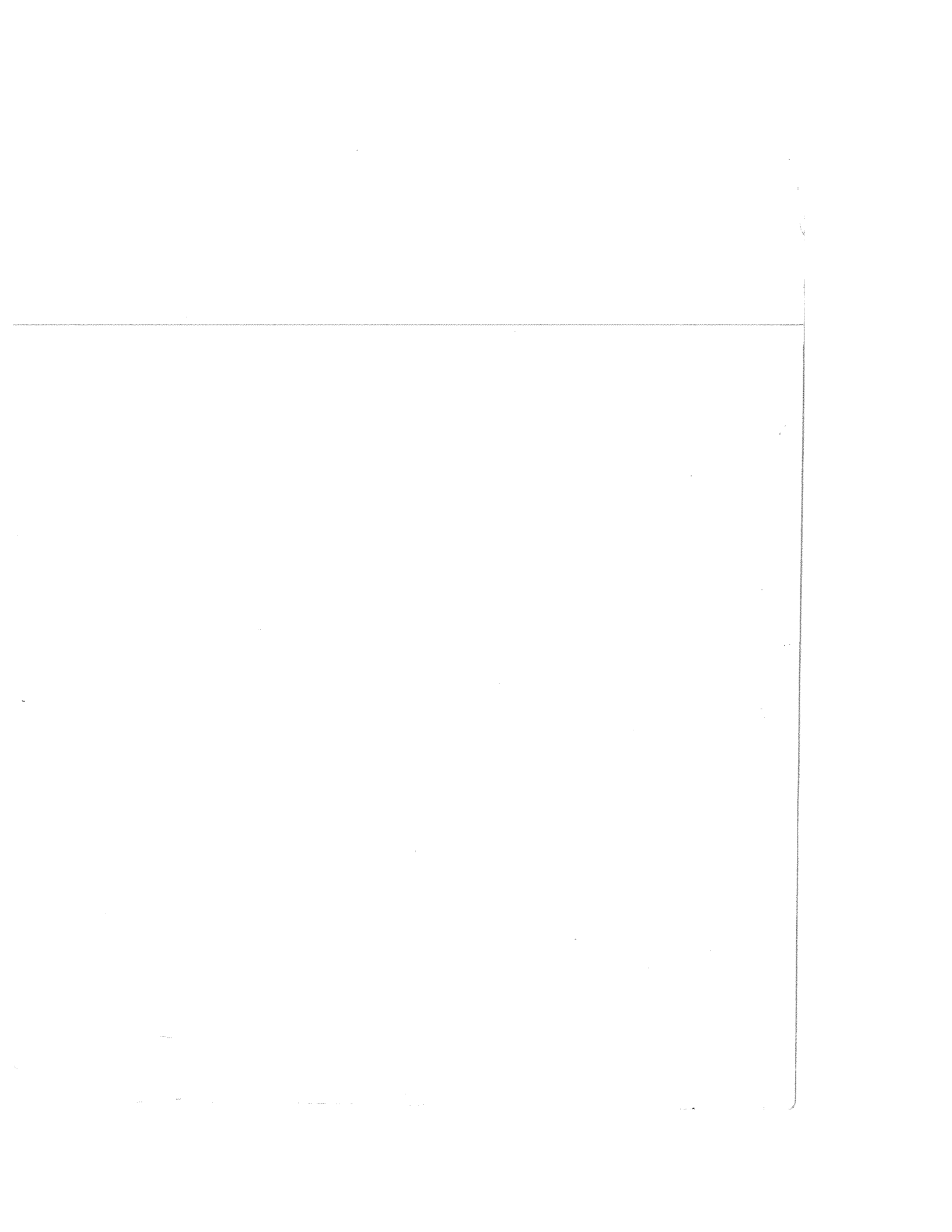
"It is not an industrial project, but the process of design in industry is absolutely the same," Stack says, in defense of turning a whole class loose on unsuspecting merchants of standard Victor mousetrap springs. Students, who undertake the assignments in pairs, learn firsthand about such areas as pulley-ratios and fundamentals of power transmission.

The parade of mousetrap-powered vehicles represents some serious personal gains for the students: thinking creatively, revising ideas to meet a deadline, and collaborating with a fellow student. The competitive spirit produces more streamlined models yearly, and anticipation of greater successes by students in the field. The ultimate aim of such projects, of course, is to provide students "hands on" experience, which helps prepare them for good jobs in industry.

Other projects and activities sponsored by the Technology Division of the College also illustrate the Division Director's belief that "some of the best learning happens outside of the formal structure." Aeronautics students, for example, plan an annual Aviaton Day in the spring featuring a military fly-over, while their flight team competes successfully in regional and national meets.

Electronics students gain valuable knowledge through certain activities in which representatives from industry serve as advisors and/or evaluators. One such activity is an annual display of student projects which incorporates technology and fabrication skills and another is a project in which advanced students design and construct an antenna to meet or exceed established parameters.

Every department of the division does, in fact, sponsor at least one non-traditional learning activity. A welding show, using welding technology students to give demonstrations to the public and potential students, is staged each spring. Students enrolled in machine tool technology take field trips to local industry and tool show. Technical arts/graphic students have opportunities for expanded learning through attendance at an annual design conference and through interaction with industrial design professionals who review their projects.





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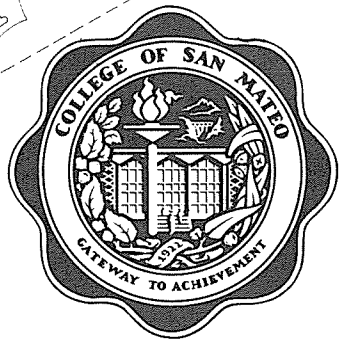
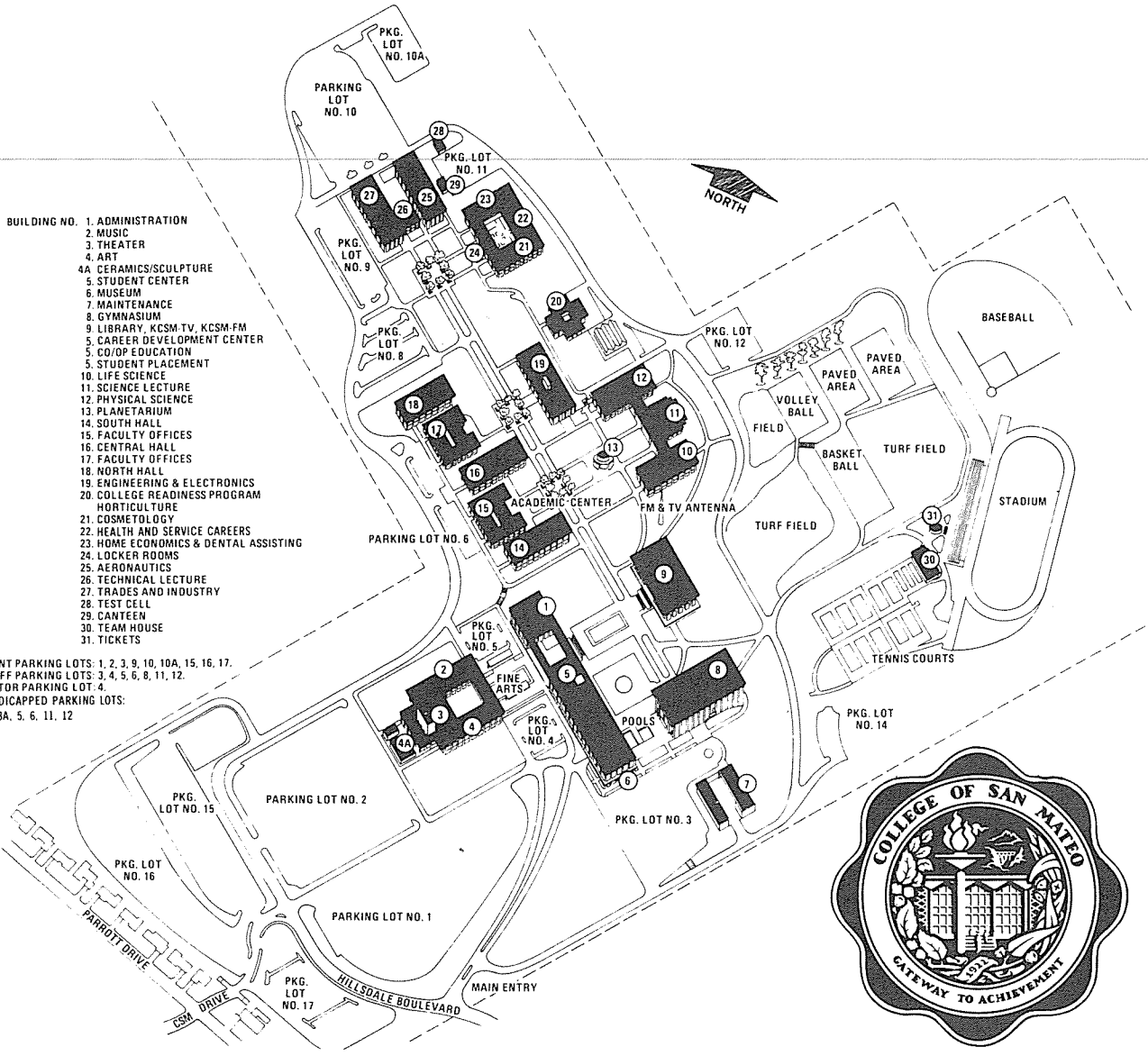
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