PHYC 2AC-2BC. Introductory Physics-Calculus Supplement (0.5-0.5)
Lec-1, conf-0.5 (9 wks)
Required of some premedical, biology, and architecture students. CSU/UC
Prereq.: PHYC 2AC: MATH 110A or 100A; Completion/concurrent enrollment in PHYC 2A
PHYC 2BC: MATH 110B or 100B; completion/concurrent enrollment in PHYC 2B
   PHYC 2AC. The application of calculus to topics in mechanics, fluids, heat and sound.
   PHYC 2BC. The application of calculus to topics in electricity, magnetism, light, and modern physics. (spring semester only)

PHYC 2AL-2BL. Introductory Physics Laboratory (1-1)
Lab-3
Required of premedical, biology, and some architecture students
Prereq.: PHYC 2AL: Completion/concurrent enrollment in PHYC 2A
PHYC 2BL: Completion/concurrent enrollment in PHYC 2B
Laboratory experiments. CSU/UC/CAN
   PHYC 2AL. Mechanics, fluids, heat, and sound.
   PHYC 2BL. Electricity, magnetism, and light.

PHYC 4A-4B-4C-4D. Physics for Scientists and Engineers (3-3-3-3)
Lec-3, conf-1
Required of physics, chemistry, and engineering majors planning to transfer to the University of California, Berkeley, or into other engineering or physical science transfer programs.
Prereq.: PHYC 4A: HS Physics or PHYC 41, and Completion/concurrent Enrollment in MATH 110B
PHYC 4B: PHYC 4A, and MATH 110B;
PHYC 4C: PHYC 4B; PHYC 4D: Completion Enrollment in MATH 110C
Coreq.: PHYC 4A: PHYC 4AL; PHYC 4B: PHYC 4BL; PHYC 4C:
   PHYC 4CL; PHYC 4D: PHYC 4DL
Advise: PHYC 4D/4DL and Completion/concurrent enrollment in PHYC 4C/4CL
Mathematical development of physics. CSU/UC/CAN
   PHYC 4A. Mechanics.
   PHYC 4B. Electricity and magnetism, and AC circuit theory.
   PHYC 4C. Waves, geometrical and physical optics, and thermodynamics.
   PHYC 4D. Relativity and quantum mechanics.

PHYC 4AL-4BL-4CL-4DL. Physics Laboratory for Scientists and Engineers (1-1-1-1)
Lab-3
Required of physics, chemistry, and engineering majors planning to transfer to the University of California, Berkeley, or into other engineering or physical science transfer programs.
Prereq.: PHYC 4AL: Completion/concurrent enrollment in PHYC 4A
Coreq.: PHYC 4BL: PHYC 4B; PHYC 4CL: PHYC 4C; PHYC 4DL: PHYC 4D
Laboratory experiments. CSU/UC/CAN
   PHYC 4AL. Mechanics, measurements, fluids.
   PHYC 4BL. Electricity and magnetism; emphasis on oscilloscope measurement techniques.
   PHYC 4CL. Experiments in sound, Fourier analysis, electrical oscillations and waves, geometrical and physical optics.
   PHYC 4DL. Laboratory experiments in modern physics.

PHYC 10. Conceptual Physics (3)
Lec-3
A conceptual, almost non-mathematical, introduction to physics with demonstrations. Topics from mechanics, properties of matter, heat, sound, electricity, magnetism, light, nuclear physics, and relativity. Emphasis on topics that lead to a better understanding of our technological society and physical environment. CSU/UC

PHYC 10L. Conceptual Physics Laboratory (1)
Lab-3
Required for students enrolled in the curriculum in RADL.
Prereq.: Completion/concurrent enrollment in PHYC 10
Laboratory experiments involving basic physics concepts. Emphasis on concept development, data handling, and laboratory skills. CSU/UC

PHYC 40. Elementary Physics (3)
Lec-3, conf-1
Prereq.: Trigonometry or Completion/concurrent enrollment in MATH 95
Elementary physics, emphasizing problem solving in kinematics, forces, energy, momentum, fluids, and electricity. CSU/UC

PHYC 41. Preparatory Physics (3)
Lec-3, conf-1
Prereq.: Completion/concurrent enrollment in MATH 110A
Elementary physics, emphasizing concepts and problem solving in kinematics, forces, energy, momentum, electricity, magnetism, vibrations and wave phenomena. CSU/UC

Pilipino
Announcement of Courses

CREDIT, DEGREE APPLICABLE COURSES:

PII 1. Elementary Pilipino (5)
Lec-5, lab-2 CR/NC avail.
Advise: ENGL 94 or ESL 82 or completion of any City College or university foreign language course.
Beginner's course. Grammar, composition, and reading. Practice in speaking and understanding simple Pilipino. CSU/UC
PIL 2. Continuation of Elementary Filipino (5)
Lec-5, lab-2 CR/NC avail.
Prereq.: PIL 1
Second semester course. Completion of elementary grammar, composition, and reading; continued practice in speaking and understanding Filipino. CSU/UC

The 9 unit sequence of Filipino 10A-10B-10C permits three repeats for a total of 18 units. It is the student's prerogative to choose which courses will be repeated.

PIL 10A-10B-10C. Conversational Filipino (3-3-3)
Lec-3, lab-2 CR/NC avail.
Prereq.: PIL 10B: 10A; PIL 10C: 10B
Intensive instruction and practice in spoken Filipino. CSU

PIL 39A-39B. Filipino Literature in Translation (3-3)
Lec-3 CR/NC avail.
Advise: Eligible for ENGL 1A
Reading and discussion of important works of Philippine literature in English translation. CSU/UC

PIL 39A. Philippine literature to 1940
PIL 39B. Philippine literature from 1940 to the present

POLS 5. International Relations (3)
Lec-3 CR/NC avail.
An introductory survey of world politics involving a historical and theoretical analysis of the relations among states and international organizations. Contemporary problem-areas and issues in an international arena of conflict and order, such as: American foreign policy; diplomacy and international bargaining; global problems of war and nuclear armament; international finance and the world economy; economic development and the world's resources; terrorism and human rights; and, on a voluntary basis, student participation in the Model United Nations. CSU/UC

POLS 6. Problems of Political Association (3)
Lec-3 CR/NC avail.
An introduction to modern Western Civilization, from a political perspective, providing an overview of politics from the origins of the nation state to super-power confrontation, with a focus on the triangular relationship of Europe, the U.S., and the U.S.S.R. The nature of government, law, ideology, revolution, and political and economic integration are discussed. CSU/UC

POLS 7. American Politics and the African American Community (3)
Lec-3 CR/NC avail.
American political institutions and their relationship to African Americans. The unique manner in which Black people have had to function both within and outside of the political system. The future of African American politics. CSU/UC

POLS 8. Political Problems of Latin Americans (3)
Lec-3 CR/NC avail.
The relationship between Latin American citizens and American political institutions. Emphasis on the political problems of Latin Americans, proposed solutions to these problems, and practical political techniques for achieving such solutions. CSU/UC

POLS 9. Campaigns and Elections (3)
Lec-3 CR/NC avail.
Offered spring and fall semesters of general election years
Survey of the theory and practice of American political campaigns and elections. Emphasis on candidates, their issue positions, strategies and experience; ballot propositions, pro's and con's, role and effect of the media, money, polls, and the changing impact of political parties and interest groups. CSU/UC

POLS 10. United States Foreign Policy (3)
Lec-3 CR/NC avail.
An introductory course emphasizing the study of current problems and issues in United States foreign policy. Major units of study include the making and carrying out of foreign policy, historical changes in American foreign relations, recent events influencing America's role as a world power, and future challenges to the United States in international affairs. CSU/UC
POLS 12. Ethnic Politics in the United States (3)
Lec-3
This course surveys the contemporary history and role of race and ethnicity in the American political system. Theories of race, migration, and ethnic political patterns are discussed in an integrative, comparative, and multidisciplinary approach. The interplay of ethnic and racial factors in the political process is systematically examined and analyzed in the context of at least three of the following groups: African Americans, Asian Americans, Chicano/Latino, Native Americans, and European Americans. Salient policy issues affecting all groups, such as civil rights, crime, immigration, and employment, are also examined. CSU/UC

POLS 18. Government and Politics of Latin America (3)
Lec-3
CR/NC avail.
The constitutional systems, political processes, and social problems of Latin-American nations. CSU/UC

POLS 20. The Politics and Policies of Cities (3)
Lec-3
CR/NC avail.
An analysis of the problems, politics, and policies of American city governments, with special emphasis on the San Francisco Bay Area. CSU

POLS 25. Political Action (3)
Lec-3, field trips
CR/NC avail.
A practical guide to citizen political participation. Emphasis on institutional possibilities of change as well as the development of political strategies. Practical political experience encouraged. CSU

POLS 35. Government and Politics of East Asia (3)
Lec-3
CR/NC avail.
A survey of political developments and changes in East Asia, with emphasis on the governments and politics of China and Japan. The role of other world powers in this region, including the Soviet Union and the United States. CSU/UC

POLS 41. Independent Studies in Political Science (1)
Lec-1
CR/NC avail.
Repeat: if no topic repeat, max. 2 units
An individualized reading or research program. CSU/UC

POLS 42A-42B-42C-42D. Discussions in Political Science (1-1-1-1)
Lec-1
CR/NC avail.
Lectures on varied subjects given by political scientists and practicing politicians (national, state and local). Seminar-type discussions and occasional field trips. CSU/UC

POLS 43. The Constitution and Individual Rights (3)
Lec-3, field trips
CR/NC avail.
A citizen’s civil and criminal rights under the Constitution. Analysis of leading cases and legal principles which protect individual freedom. CSU/UC

POLS 45. Government and Politics of Middle East (3)
Lec-3
CR/NC avail.
A survey of political developments and changes in the Middle East, with emphasis on the Arab states and Israel. CSU/UC

POLS 46. American Political Systems (3)
Lec-3, field trips
CR/NC avail.
Not designed to satisfy the American history and institutions requirement for the University of California nor for the California State Universities and Colleges.
No credit for POLS 46 taken after completion of POLS 1
A survey of the relevant aspects of events and policies that have brought about change at all levels of government on the American scene—local, state, and national. Emphasis on basic political problems and on an analysis and evaluation of the solutions offered historically, with consideration of relationships between California and the United States, as well as consideration of local government in the San Francisco Bay Area. CSU/UC

POLS 47. Government and Politics of Southeast Asia (3)
Lec-3
CR/NC avail.
A survey of political developments and changes in Southeast Asian states (the Philippines, Indonesia, Malaysia, Thailand, and Singapore) and such other states as Viet Nam, Laos, Cambodia, and Burma. Internal politics and international relations. CSU/UC

POLS 48. Government and Politics of Africa (3)
Lec-3
CR/NC avail.
A survey of political development and change in contemporary Africa, with emphasis on Africa south of the Sahara. Major factors shaping African politics and institutions: ideology, nationalism, colonialism, political groups, and nation-building. CSU/UC

POLS 51-52-53. Selected Topics in Political Science
(1-2-3)
Lec-1,2,3
Repeat: if no subject repeat
Selected topics in political science will be explored through lectures, discussions, film, video, and/or television leading to a critical analysis and understanding of the topic under discussion.
CSU/POLS 53A. "Tales of the City": San Francisco Government and Politics

Psychology
Announcement of Courses

CREDIT, DEGREE APPLICABLE COURSES:

PSYC 1. General Psychology (3)
Lec-3
CR/NC avail.
Advising: ENGL 92, ESL 82, or eligibility for ENGL 94
A scientific approach to the study of behavior and mental processes designed for both majors and non-majors. Topics include: research methods, physiology of behavior, sensory systems, learning, memory, life-span development, motivation, emotion, personality theories, social psychology, abnormal psychology, and psychotherapy. CSU/UC/CAN
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1B</td>
<td>Introduction to Biopsychology</td>
<td>(3)</td>
<td>Lec-3</td>
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<td>Prereq.: PSYC 1</td>
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<tr>
<td>PSYC 2</td>
<td>Problems and Methods in Experimental Psychology</td>
<td>(3)</td>
<td>Lec-3</td>
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<td>Prereq.: PSYC 1</td>
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<tr>
<td>PSYC 5</td>
<td>Introduction to Statistics for the Behavioral Sciences</td>
<td>(4)</td>
<td>Lec-5</td>
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<td>Prereq.: MATH 92, 860, or Demonstration of MATH 860 exit skills (2nd Year HS Algebra)</td>
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<tr>
<td>PSYC 7</td>
<td>The Psychology of Biofeedback</td>
<td>(3)</td>
<td>Lec-3</td>
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<td>Basic information about psychology and its relationship to the nervous system, including classroom and laboratory experience, research methods and applications. Focuses upon sympathetic nervous system control, muscle regulation, body temperature, and brain-wave biofeedback through the use of electronic instrumentation. CSU</td>
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<tr>
<td>PSYC 9</td>
<td>The Psychology of Stress</td>
<td>(3)</td>
<td>Lec-3</td>
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<td>Review of research on the causes and consequences of stress along physical, behavioral, emotional and mental dimensions. Emphasis will be placed on the practical implications for better managing stress in our own lives. CSU</td>
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<tr>
<td>PSYC 10</td>
<td>Abnormal Psychology</td>
<td>(3)</td>
<td>Lec-3</td>
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<td>Prereq.: PSYC 1</td>
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<tr>
<td>PSYC 12</td>
<td>Sport Psychology</td>
<td>(3)</td>
<td>Lec-3</td>
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<td>Introductory survey of psychological factors that affect participation, effort, skill development and performance level in sport, and how these psychological factors interact with genetic predispositions and social influences. CSU</td>
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<tr>
<td>PSYC 14</td>
<td>Psychology of Shyness and Self Esteem</td>
<td>(1)</td>
<td>Lec-1</td>
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<td>An examination of psychological theories and research on the development of shyness and self esteem. Techniques for reducing shyness and raising self esteem. CSU</td>
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<tr>
<td>PSYC 15</td>
<td>Assertive Behavior</td>
<td>(1)</td>
<td>Lec-1</td>
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<td>Emphasis on cognitive-behavioral theories and their application to assertive behavior. Assertiveness techniques in a variety of situations, including communication with family, friends and work associates. CSU</td>
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<tr>
<td>PSYC 16</td>
<td>Psychology of Successful People</td>
<td>(3)</td>
<td>Lec-3</td>
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<td>Critical exploration of how success is defined, and what makes people successful. Reviews research on skills, traits and habits that predict and underlie multiple dimensions of success, as well as how they intertwine with each other and with environmental and biological influences. Emphasis on helping students acquire insights and tools they can apply toward achieving success in areas such as careers, relationships, health, longevity, stress management, resilience, college, life-sex satisfaction and self-satisfaction. CSU</td>
</tr>
<tr>
<td>PSYC 22</td>
<td>Psychology of Race and Ethnic Relations</td>
<td>(3)</td>
<td>Lec-3</td>
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<td>Not open to students who are enrolled in or who have completed PSYC 23.</td>
</tr>
<tr>
<td>PSYC 23</td>
<td>Psychology of Race and Ethnic Relations</td>
<td>(3)</td>
<td>Lec-3</td>
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<td>Prereq.: PSYC 1</td>
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</tbody>
</table>
PSYC 25, Psychology of Sex Differences (3)  
Lec-3  CR/NC avail.  
Analysis of sex differences from physiological, psychological, and social perspectives; exploration of areas such as abilities, achievement, aggression, attitudes, including the study of concepts of femininity, masculinity, and androgyny. Designed to increase understanding of personal and professional relationships. CSU/UC

PSYC 26, Human Relations (3)  
Lec-3  CR/NC avail.  
An introduction to the understanding of human behavior, to enhance development of social skills and attitudes for more effective interpersonal relations and social behavior as related to family, group, and vocational contexts. CSU

PSYC 40, Child and Adolescent Psychology (3)  
Lec-3  CR/NC avail.  
Advis. PSYC 1  
Introduction to the psychology of child development from conception through adolescence. Examination of research, theories, and practical information for parents, caretakers, teachers, mental health workers, physicians, and concerned adults. Emphasis on how a child's development is enhanced, restricted, or distorted; emotional, social and cognitive development at different age/stage levels. Role of heredity and environment on maturation and learning in various areas of behavior. CSU/UC

PSYC 41-42-43, Current Issues and Innovations in Psychology (1-2-3)  
Lec-1,2,3  CR/NC avail.  
Repeat: if no subject repeat  
Exploration of topics of current interest and innovations in psychology. CSU/UC

PSYC 61-62-63, Fieldwork in Psychology (1-2-3)  
Conf-1, work-5,10,15  CR/NC only  
Prereq.: PSYC 1 or 26  
Repeat: max. 6 units  
Work experience in a psychology-related campus placement or a community service agency, guided experience in the application of psychological principles and methods. Primarily for prospective majors and related majors. CSU

Public Safety  
See listings at Administration of Justice and Fire Science Department.

Radiation Oncology Technology Announcement of Curricula

Degree Curriculum  
The radiation oncology technologist (radiation therapy technologist) is an essential member of the team responsible for the treatment of malignant diseases. The Option in Radiation Oncology Technology is offered in cooperation with the Radiotherapy Department of the University of California Medical Center and several other Bay Area hospitals.

Consideration for Admission to the Curriculum: To be considered for admission to the curriculum, applicants must:  
1. Have completed with final grades of C or higher:  
   a. Elementary algebra or MATH 840. (Documented algebra classes completed at secondary school levels may be credited by demonstration of a score on the C.S.F. Algebra Skills Placement Test indicating eligibility for MATH 90 or 860);  
   b. One year high school geometry or MATH 850 or 855;  
   c. Chemistry 30/31, 32 or 40;  
   d. One year high school physics, or PHYS 40.  
2. Have at least a 2.0 cumulative grade point average in college work previously completed.  
3. Be in good physical and mental health.  
4. File with the Office of Admissions and Records a completed application for admission to City College (for dates, see in this catalog the "Calendar of Instruction")  
5. Take the City College of San Francisco placement tests on the date or dates stated in the notice mailed by the College. All applicants must take the City College placement tests (mathematics, English).  
6. Submit an application to the Radiologic Technology Office.  

For application deadline, contact Radiation Oncology Department. (Applications are available in the Radiologic Technology Office, Cloud Hall, Room 239.)  
Applicants who satisfy the preceding requirements will qualify to participate in an orientation session conducted by the faculty of the Radiation Oncology Program to review the requirements and expectations of the program.

Coeducational Enrollment. Enrollment is open to both men and women.

Health Clearance Requirements. In addition to academic and orientation requirements, enrollment in the Radiation Oncology Technology Program is subject to evidence of immunizations per the San Francisco Health Department. The forms are available from the Radiologic Technology Office.

Instruction in the Major. The Option in Radiation Oncology Technology is 26 months in length, including an internship of thirteen weeks. The course of study includes instruction in the following: radiation therapy techniques, radiobiology, oncology, treatment planning, radiation protection, anatomy, physics, patient care, film processing and exposure factors, elementary positioning, and physiology. Clinical education in Radiation Oncology Technology, a course extending over an academic year, plus two summer sessions, is taught in the radiotherapy departments of the hospitals affiliated with the program. Members of the professional and technical staffs of those departments serve as instructors. Students have the opportunity to rotate to four different major cancer centers. The final summer session is thirteen weeks in length and may require attendance at a center away from San Francisco.

Scholarship Requirements. Students who receive a final grade lower than C (75%) in any of the required courses in radiologic technology, are required to repeat the course before proceeding to the next course in sequence. Students whose cumulative grade point average drops below 2.0, will not be allowed to proceed to the next course(s) until the GPA has been raised to 2.0 or higher.
Basis for Disqualification. Students who receive a final grade lower than C (75%) will be allowed to repeat that Radiation Oncology Technology (RADL) course once. Any further RADL grades lower than C (75%), or a grade point average below 2.0, will be cause for dismissal from the Radiologic Oncology Technology Program. Students may be disqualified prior to the end of the semester should they receive a grade lower than C in their clinical performance. Students may be suspended or dismissed for excessive absences either on campus or at the clinical affiliate, according to the attendance policy, or for other reasons consistent with College policy, as set forth in the Catalogue under General Information.

Readmission of Students Disqualified Because of Unsatisfactory Scholarship. Students who have been disqualified from continuing in the curriculum because they received a final grade lower than C and who desire to be readmitted must submit a new application to the Radiology Department Review Committee. As part of the procedure, the Committee will meet with the applicant prior to making a decision. The Committee will base its recommendations on the current policy of the Radiation Oncology Technology Program, which is available from the department office.

Associate in Science Degree and Award of Achievement. The course of study is designed so that students may satisfy the requirements for graduation from the College. Students who satisfy these requirements, complete the required courses in the curriculum with final grades of C or higher, and complete the internship, receive the Award of Achievement in Radiation Oncology Technology.

State and National Certification. Graduates of the Option in Radiation Oncology Technology are eligible to take the certification examination administered by the California Department of Health. State certification is required for employment in California. Graduates are eligible for and are encouraged to take the certification examination given by the American Registry of Radiologic Technologists, a national certification board recognized by the Joint Review Committee for Education in Radiologic Technology. Many employers require national certification.

Courses Required for the Award of Achievement in Radiation Oncology Technology
The following sequence of courses is for students starting in the fall. The sequence changes for students starting in the spring. Contact the Radiologic Technology office for further information.

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>ANAT 25 Gen Human Anat</td>
<td>4</td>
</tr>
<tr>
<td>DMI 49 Intro to Radi</td>
<td>3</td>
</tr>
<tr>
<td>DMI 50A Intro to Med Radiography</td>
<td>3</td>
</tr>
<tr>
<td>RADL 52 Patient Care and Staff Relationships</td>
<td>2</td>
</tr>
<tr>
<td>HLTH 14* CPR Adv First Aid Emerg Care</td>
<td>2</td>
</tr>
</tbody>
</table>

Additional graduation requirements
* This course is strongly recommended, but may be replaced by a current Adult/Pediatrics Red Cross CPR card. Evidence must be furnished to the Radiology Department office prior to the start of RADL 80.

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ANAT 26 Sectional Anat</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1 or 12 Hum Phys or Intro to Hum Phys</td>
<td>4</td>
</tr>
<tr>
<td>DMI 50B Radiologic Physics and Equipment</td>
<td>2</td>
</tr>
<tr>
<td>RADL 70 Radiat Protect</td>
<td>2</td>
</tr>
<tr>
<td>RADL 80 Intro to Radiat Onc &amp; Clinic Observ (spring only)</td>
<td>3</td>
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Additional graduation requirements

Summer Session (Eight weeks)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>RADL 71 Elem Radiat Therapy Tech</td>
<td>2</td>
</tr>
<tr>
<td>RADL 81 Conf to Clinic Exper in Radiat Therapy</td>
<td>2</td>
</tr>
<tr>
<td>RADL 82 Clinical Work Exper in Therapeutic Radi</td>
<td>2</td>
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Third Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>DMI 56 Pathology (fall only)</td>
<td>2</td>
</tr>
<tr>
<td>RADL 72 Physics of Radi Ther (fall only)</td>
<td>2</td>
</tr>
<tr>
<td>RADL 74 Oncology (fall only)</td>
<td>3</td>
</tr>
<tr>
<td>RADL 83 Clin Wk Exper in Ther Radl (fall only)</td>
<td>4</td>
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</table>

Additional graduation requirements

Fourth Semester

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<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>RADL 73 Radiation Bio (spring only)</td>
<td>2</td>
</tr>
<tr>
<td>RADL 75 Adv Radiat Therapy Tech (spring only)</td>
<td>2</td>
</tr>
<tr>
<td>RADL 84 Clinic Wk Exper in Therc Rad (spring only)</td>
<td>4</td>
</tr>
</tbody>
</table>

Additional graduation requirements

Summer Session (Thirteen weeks)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>RADL 85 Conf to Clinic Exper in Therapeutic Radi</td>
<td>1</td>
</tr>
<tr>
<td>RADL 86 Clinic Wk Exper in Therapeutic Radi</td>
<td>2</td>
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</tbody>
</table>

Recommended electives: Courses in Computer Science; PSYC 1, 26; SOC 28, Speech 11, 12 or 1A; classes in typing and/or keyboarding.

Radiation Oncology Technology Announcement of Courses

CREDIT, DEGREE APPLICABLE COURSES:

RADL 52. Patient Care and Staff Relationships (2)
Lec-3
Coreq.: DMI 50A
Students With Prior Clinical Experience Admitted To The Diagnostic Medical Imaging or Radiation Oncology Technology program may challenge this course.
Introduction to the organization of health care in this country, the ethical and interpersonal responsibilities of radiographers, the meaning of illness and therapies to the patient, and theory and practice in assessing patient situations and in meeting basic patient needs at various clinical sites. CSU

RADL 70. Radiation Protection (2)
Lec-2, lab-1
Prereq.: DMI 50A
Coreq.: Clinical Placement For Diagnostic Students; enrollment in RADL 80 For Oncology Students.
Methods of reducing dose per exposure to patients, and safe practices for protection of personnel. Emphasis is placed on learning State regulations applying to: radiography, fluoroscopy, radiation therapy and nuclear medicine. CSU
RADI 71. Elementary Radiation Therapy Technique (2) su
Lec-4, lab-2 (6 wks)
Prereq.: ANAT 25; DMI 50A and 50B; RADI 70 and 80
Coreq.: RADI 81 and 82

RADI 72. The Physics of Radiation Therapy and Radium Therapy (2) fa
Lec-2, lab-var, field trips
Prereq.: RADI 71
Coreq.: RADI 74 and 83
Advanced radiation physics as applied to radiation therapy, radium usage, handling, and dose calculations. A detailed review of the production of X-rays and gamma sources, the absorption and modification of X-rays, and dose measurement. Machine calibration. CSU

RADI 73. Radiation Biology (2) sp
Lec-2, field trips
Prereq.: RADI 70
Coreq.: RADI 75 and 84
Basic radiation biology with applications to radiation therapy, radiation chemistry, target theory, mechanisms of cell killing, tissue and whole-body effect, radiation botany, and the action of radiations on tumors. Genetic effects and the hazards of radiations. Combined chemotherapy and radiation therapy techniques. CSU

RADI 74. Oncology (3) fa
Lec-3, field trips
Prereq.: RADI 80
Coreq.: RADI 72 and 83
An introduction for therapeutic radiologic technologists to the basis of medical and nursing practice used in the treatment of cancer patients. Description of tumors of each primary site, their histology and routes of spread. The study of each site with photographs of patients, radiographs, pathology specimens, and microscopic slides. The methods of treatment of cancer of each area, including surgery, drugs, and radiation therapy, with emphasis on radiation-therapy techniques. Associated medical problems in cancer patients and their common management, including pharmacology. CSU

RADI 75. Advanced Radiation Therapy Techniques (2) sp
Lec-2, lab-2
Prereq.: RADI 72
Coreq.: RADI 73 and 84
Advanced methods of patient immobilization and positioning, techniques in the manufacturing of casts, molds, special shields and shaping devices. Design and manufacture of compensating filters. Advanced treatment planning and isodose plotting, including computer applications. Experience in entering data into computer programs. CSU

RADI 80. Introduction to Radiation Oncology and Clinical Observations (3) sp
Lec-3, lab-3
Prereq.: ANAT 25; RADI 52 and DMI 50A
Introduction to basic concepts of cancer and its management. Basic therapeutic physics, dose calculation, positioning, and the special care of cancer patients. Supervised clinical observation. CSU

RADI 81. Conference to Accompany Clinical Experience in Radiation Therapy (2) su
Conf-5 (6 wks)
Prereq.: DMI 50B, and 70
Coreq.: RADI 71 and 82
Instruction in patient positioning, beam shaping and defining, dose calculation, treatment planning, operation of radiotherapy machines, machine calibration and record keeping. CSU

RADI 82. Clinical Experience in Radiation Therapy (2) su
Lab-20 (8 wks)
Coreq.: RADI 71 and 81
Practical experience in the radiation therapy department of the University of California Medical Center or Bay Area hospitals. CSU

RADI 83. Clinical Experience in Radiation Therapy (4) fa
Lec-2, lab-20
Prereq.: RADI 82
Coreq.: RADI 72 and 74
Practical experience in the radiation therapy department of a hospital. Student must perform all oncology goals as stated in the course objectives. CSU

RADI 84. Clinical Experience in Radiation Therapy (4) sp
Lec-2, lab-20
Prereq.: RADI 83
Coreq.: RADI 73 and 75
Practical experience in the radiation therapy department of a hospital. Student must perform all oncology goals as stated in the course objectives. CSU

RADI 85. Conference to Accompany Clinical Experience in Radiation Therapy (1) su
Conf-2 (8 wks)
Prereq.: RADI 84
Coreq.: RADI 86
Practical experience in the radiation therapy department of a hospital. Student must perform all oncology goals as stated in the course objectives. A comprehensive examination and an evaluation of the subject matter covered in therapeutic radiologic technology. CSU

RADI 86. Clinical Experience in Radiation Therapy (2) su
Lab-40 (13 wks)
Prereq.: RADI 84
Coreq.: RADI 85
Advanced practical experience in a radiation therapy department. CSU
RADL 107. Principles and Techniques of Fluoroscopy (3)
Lec-3, lab-var
Prereq.: Student must be a California certified radiologic technologist (CRT) or, course may be taken concurrently in the last two semesters of training in a radiologic technology program.
Fluoroscopy principles including anatomy of appropriate structures, image intensifiers, image recording systems, illumination and photometry, regulatory provisions, radiation safety and quality assurance. CSU

Russian
Announcement of Courses

Students of beginning Russian are directed to consider RUSS 1, 1A, and 10A.

CREDIT, DEGREE APPLICABLE COURSES:

RUSS 1. Elementary Russian (5)
Lec-5, lab-2
CR/NC avail.
Advisory: ENGL 94 or higher or ESL 82 or higher or any City College or university foreign language course
Not open to students who are enrolled in or who have completed RUSS 21
Beginner's course. Grammar, composition and reading. Practice in speaking and understanding Russian. CSU/UC

RUSS 1A-1B. Elementary Russian (3-3)
Lec-3, lab-2
CR/NC avail.
Advisory: RUSS 1A: ENGL 94 or higher or ESL 82 or higher or any City College or university foreign language course
Prereq.: RUSS 1B: RUSS 1A
Not open to students who are enrolled in or who have completed RUSS 21A-21B.
Grammar, composition and reading. Practice in speaking and understanding Russian. CSU/UC
RUSS 1A-1B = RUSS 1

RUSS 2. Continuation of Elementary Russian (5)
Lec-5, lab-2
CR/NC avail.
Prereq.: RUSS 1 or 1B
Not open to students who are enrolled in or who have completed RUSS 22
Second semester course. Continuation of elementary grammar, composition and reading; continued practice in conversation. CSU/UC

RUSS 2A-2B. Continuation of Elementary Russian (3-3)
Lec-3, lab-2
CR/NC avail.
Prereq.: RUSS 2A: RUSS 1 or 1B RUSS 2B: RUSS 2A
Not open to students who are enrolled in or who have completed RUSS 22A-22B
Continuation of elementary grammar, composition and reading; continued practice in conversation. CSU/UC
RUSS 2A-2B = RUSS 2

RUSS 3. Intermediate Russian (5)
Lec-5, lab-2
CR/NC avail.
Prereq.: RUSS 2 or 2B or 22 or 22B
Third Semester Course: Continuation and Review of Grammar, Composition and Reading; Continued Practice in Conversation. CSU/UC

RUSS 3A-3B. Intermediate Russian (3-3)
Lec-3, lab-2
CR/NC avail.
Prereq.: RUSS 3A: RUSS 2, 2B, 22, or 22B RUSS 3B: RUSS 3A
Review of grammar and composition; reading of cultural materials; continuing practice in the use and comprehension of spoken Russian. CSU/UC
RUSS 3A-3B = RUSS 3

Fourth Semester Russian
Available through the cross-registration policy of the San Francisco Consortium. See the department head of the Foreign Language Department.

The 12 unit sequence of Russian 10A-10B-10C-10D permits three repeats for a total of 21 units. It is the student's prerogative to choose which courses will be repeated.

RUSS 10A. Beginning Practical Spoken Russian (3)
Lec-3, lab-2
CR/NC avail.
Not open to native speakers of Russian
Beginner's course. Extensive oral training in Russian. Emphasis on practical vocabulary and idiom rather than on formal grammar. CSU

RUSS 10B. Continuation of Beginning Practical Spoken Russian (3)
Lec-3, lab-2
CR/NC avail.
Prereq.: RUSS 10A
Open to native speakers of Russian only with the consent of the instructor
Second semester course. Extensive oral training in Russian. Emphasis on practical vocabulary and idiom. CSU

RUSS 10C. Intermediate Conversational Russian (3)
Lec-3, lab-2
CR/NC avail.
Prereq.: RUSS 10B
Open to native speakers of Russian only with the consent of the instructor
Third semester course. Continuation of extensive oral training in Russian. Designed for students who wish to continue acquiring advanced skills of spoken Russian with a minimum of formal grammar. CSU

RUSS 10D. Continuation of Intermediate Conversational Russian (3)
Lec-3, lab-2
CR/NC avail.
Prereq.: RUSS 10C
Open to native speakers only with the consent of the instructor
Fourth semester course. Continuation of extensive oral training in Russian. Designed for students who wish to continue acquiring advanced skills of spoken Russian with a minimum of formal grammar. CSU
RUSS 15A-15B. Advanced Russian Conversation (3-3)
Lec-3, lab-2
Prereq.: RUSS 10C or 10D
RUSS 15A not prerequisite to RUSS 15B
Advanced conversation on Russian culture and civilization.
CSU/UC

RUSS 20. Independent Studies in Russian (1-3)
Ind s-t,5,10,15
Prereq.: RUSS 2 or 10C or 10D
Repeat: max. 3 units
An individualized study program for improving and increasing reading and writing skills in the Russian language. CSU/UC

RUSS 21. Elementary Russian for Bilingual Students (5)
Lec-5
CR/NC avail.
Prereq.: Oral Fluency in Russian
Not open to students who are enrolled in or who have completed RUSS 11
Designed for students who are effective in oral communication in Russian within their communities, but who have little and/or no formal training in the written forms of the language.
Beginner's course for bilingual students; elementary grammar, compositions and reading; special emphasis on the written aspect of the language. CSU/UC

RUSS 21A-21B. Elementary Russian for Bilingual Students (3-3)
Lec-3
CR/NC avail.
Prereq.: RUSS 21A: Oral Fluency in Russian RUSS 21B: Oral Fluency in Russian or RUSS 21A
Not open to students who are enrolled in or who have completed RUSS 1A-1B.
Beginner's courses for bilingual students; elementary grammar, composition, and reading; special emphasis on the written aspect of the language. CSU/UC
RUSS 21A-21B = RUSS 21

RUSS 22. Continuation of Elementary Russian for Bilingual Students (5)
Lec-5
CR/NC avail.
Prereq.: Oral Fluency in Russian or RUSS 21 or 21B
Not open to students who are enrolled in or who have completed RUSS 2.
Designed for bilingual students who are effective in oral communication in Russian within their communities, but who have little and/or no formal training in the written forms of the language.
Second semester course for bilingual students; continuation of elementary grammar, composition and reading; special emphasis on the written aspect of the language. CSU/UC

RUSS 22A-22B. Continuation of Elementary Russian for Bilingual Students (3-3)
Lec-3
CR/NC avail.
Prereq.: RUSS 22A: Oral Fluency in Russian or RUSS 21 or 21B RUSS 22B: Oral Fluency in Russian or RUSS 22A
Designed for bilingual students who are effective in oral communication in Russian within their communities, but who have little and/or no formal training in the written forms of the language.
Not open to students who are enrolled in or who have completed RUSS 2 or 2A-2B
Second level courses for bilingual students; continuation of elementary grammar, composition, and reading; special emphasis on the written aspect of the language. CSU/UC
RUSS 22A-22B = RUSS 22

RUSS 39A-39B. Russian Literature in Translation (3-3)
Lec-3
CR/NC avail.
Advise: Eligible for ENGL 1A
RUSS 39A not prerequisite to RUSS 39B
No knowledge of Russian required
Reading and discussion of Russian literature in English translation. CSU/UC
RUSS 39A. Russian literature and selected authors of the twelfth to nineteenth centuries, with main emphasis on the nineteenth century.
RUSS 39B. Russian literature and selected authors of the twentieth century.

RUSS 41. Russian Culture and Civilization (3)
Lec-3
CR/NC avail.
Advise: Eligible for ENGL 1A
No knowledge of Russian required
A consideration of the major achievements of Russian culture as reflected in language, history, literature, the arts, philosophy, religion and daily life. CSU/UC

Sociology
Announcement of Courses

CREDIT, DEGREE APPLICABLE COURSES:

SOC 1. Introduction to Sociology (3)
Lec-3
CR/NC avail.
Designed for general education or those students majoring in one of the behavioral sciences. Introduction to human interaction from the sociological perspective and through the utilization of sociological concepts, theories and principles.
Topics include culture, socialization, organizations, deviance, stratification, institutions, population, and social change. CSU/UC/CAN

SOC 1AC. Introduction to Sociology: Focus on American Cultures (3)
Lec-3
CR/NC avail.
Introduction to human interaction, the sociological perspective, social processes, social structure, and social analysis through the study of three cultures from five of the following groups: African American, Asian/Pacific Islander, Chicano/Latino, Native American, and European American. CSU/UC
SOC 2. Social Deviance and Social Issues (3)
Lec-3 CR/NC avail.
Description and analysis of deviance in the United States.
Crime, drug abuse, prostitution, child abuse, rape, mental
disorder and other forms of deviance are discussed in terms of
socio-psychological processes and effects, changing society
and the politics of deviance. CSU/UC/CAN

SOC 25. Sex and Gender in American Society (3)
Lec-3 CR/NC avail.
How social institutions such as education, family, work, law,
etc. affect women and men differently; how gender roles influence
self-concept as well as educational opportunities. Examines the contemporary status of all American women, including
African American, Latina, and Asian American, in terms of
differences and similarities. The strategies, policies, and
laws necessary to eliminate sexism from society and to create
alternatives for women and men. CSU/UC

SOC 28. Dying and Death in Society (3)
Lec-3 CR/NC avail.
Helpful for those in medical care, social services, counseling
or for personal enrichment. Study of the various death systems
common in America with special focus on San Francisco.
Beliefs, attitudes, anxieties, and behaviors associated with
dying, death and bereavement in terms of sociological theory.
Guest speakers, film, history and literature are integrated in an
interdisciplinary approach to cultural studies. CSU

SOC 30. Social Psychology (3)
Lec-3 CR/NC avail.
The dynamics of human behavior from the perspective of
social psychology, emphasizing the social-psychological orientations
of contemporary sociology. Investigation of interaction processes
in the person-environment relationship. Topics such as
communication, socialization, role taking, self-identity,
personal organization, and social structure. CSU/UC

SOC 35. Sex, Marriage, and Family Relationships (3)
Lec-3 CR/NC avail.
A cross-cultural and cross-social study of family relationships,
their development and diversity. Focus on family structure and
on the functions of family relations, both contemporary and
historical, in such areas as sex, reproduction, child-rearing, econ-
omics and social support; family problems and marital dis-
solution. CSU/UC

SOC 41-42-43. Current Issues and Innovations in
Sociology (1-2-3)
Lec-1,2,3, field trips CR/NC avail.
Repeat: if no subject repeat
Exploration of topics of current interest and innovations in soci-
ology. CSU/UC

Spanish
Announcement of Courses

Students of beginning Spanish are directed to consider Spanish
courses numbered 1, 1A, and 10A.

CREDIT, DEGREE APPLICABLE COURSES:

SPAN 1. Elementary Spanish (5)
Lec-5, lab-2 CR/NC avail.
Advis: ENGL 94 or higher or ESL 82 or higher or any City
College or university foreign language course.
Beginner's course. Grammar, composition and reading. Practi-
ce in speaking and understanding Spanish. CSU/UC/CAN

SPAN 1A-1B Elementary Spanish (3-3)
Lec-3, lab-2 CR/NC avail.
Prereq.: SPAN 1B: SPAN 1A
Advis: ENGL 94 or higher or ESL 82 or higher or any City
College or university foreign language course
Grammar, composition and reading. Practice in speaking and
understanding Spanish. CSU/UC/CAN
SPAN 1A-1B = SPAN 1

SPAN 2. Continuation of Elementary Spanish (5)
Lec-5, lab-2 CR/NC avail.
Prereq.: SPAN 1 or 1B
Second semester course: Completion of elementary grammar.
Composition and reading. Continued practice in conversation.
CSU/UC/CAN

SPAN 2A-2B. Continuation of Elementary Spanish (3-3)
Lec-3, lab-2 CR/NC avail.
Prereq.: SPAN 2A: SPAN 1 or 1B; SPAN 2B: SPAN 2A
Completion of elementary grammar. Composition and reading.
Continued practice in conversation. CSU/UC/CAN
SPAN 2A-2B = SPAN 2

SPAN 3. Intermediate Spanish (5)
Lec-5, lab-2 CR/NC avail.
Prereq.: SPAN 2 or 2B
Intensive review of grammar. Culture and composition.
Designed for students who need reinforcement and expansion of
the structures of the Spanish language. Conducted in
Spanish. CSU/UC/CAN

SPAN 3A-3B. Intermediate Spanish (3-3)
Lec-3, lab-2 CR/NC avail.
Prereq.: SPAN 2 or 2B
SPAN 3A not prerequisite to SPAN 3B
Intensive review of grammar. Culture and composition.
Designed for students who need reinforcement and expansion of the
structures of the Spanish language. Conducted in
Spanish. CSU/UC/CAN
SPAN 3A-3B = SPAN 3

SPAN 4. Introduction to Literature in Spanish (3)
Lec-3, lab-1 CR/NC avail.
Prereq.: SPAN 2 or 2B
SPAN 3 not prerequisite to SPAN 4.
Readings of literary and cultural selections; composition;
review of selected grammar. Conducted in Spanish. CSU/UC/
CAN
SPAN 5-5S. Advanced Spanish: Conversation on Hispanic Culture and Civilization (3-3)
Lec-3, lab-1
Prereq.: SPAN 2 or 2B
SPAN 5 not prerequisite to SPAN 5S.
Readings in and discussions of Hispanic Civilization: Spain and Latin America. Exclusively oral training to acquire greater command of the spoken language through building vocabulary, improving pronunciation and expressing ideas in a more natural manner. Conducted in Spanish. CSU/UC

SPAN 5. Paleolithic Period to the Golden Age
SPAN 5S. Golden Age to Present

The 12 unit sequence of Spanish 10A-10B-10C-10D permits three repeats for a total of 21 units. It is the student's prerogative to choose which courses will be repeated.

SPAN 10A. Beginning Conversational Spanish (3)
Lec-3, lab-2
CR/NC avail.
Advising: Completion/concurrent enrollment in 1, 1A or 1B
Not open to native speakers of Spanish.
Beginner's course. Intensive oral practice of basic structures and vocabulary most often used in conversation. Designed for students who wish to acquire basic skills of spoken Spanish.

SPAN 10B. Continuation of Beginning Conversational Spanish (3)
Lec-3, lab-2
Prereq.: SPAN 10A
Advising: SPAN 2, 2A, or 2B
Not open to native speakers of Spanish.
Second semester course: Extensive oral practice of basic structures and vocabulary most often used in conversation. Designed for students who wish to acquire basic skills of spoken Spanish.

SPAN 10C. Intermediate Conversational Spanish (3)
Lec-3, lab-2
Prereq.: SPAN 10B
Advising: SPAN 3 or 4
Not open to native speakers of Spanish.
Third semester course: Extensive oral practice of basic structures and vocabulary most often used in conversation. Designed for students who want to acquire more advanced skills of spoken Spanish.

SPAN 10D. Continuation of Intermediate Conversational Spanish (3)
Lec-3, lab-2
Prereq.: SPAN 10C
Advising: Completion/concurrent enrollment in SPAN 3, 3A, 3B, 4, or 5
Not open to native speakers of Spanish.
Fourth semester course. Extensive oral practice of basic structures and vocabulary most often used in conversation. Designed for students who wish to acquire basic skills of spoken Spanish.

SPAN 31A-31B. Intermediate Spanish for Bilingual Students (3-3)
Lec-3
CR/NC avail.
Advising: Oral fluency in Spanish
Intensive review of grammar. Composition and translation. Designed for bilingual students who are effective in oral communication in Spanish within their communities, but have little knowledge or formal training in written forms of the Spanish language. Emphasis on increasing vocabulary, reading, and writing skills through short stories, essays, and guided compositions. CSU/UC

SPAN 31A-31B = SPAN 31

SPAN 31A-31B. Intermediate Spanish for Bilingual Students (3-3)
Lec-3
CR/NC avail.
Advising: Oral fluency in Spanish
Intensive review of grammar. Composition and translation. Designed for bilingual students who are effective in oral communication in Spanish within their communities, but have little knowledge or formal training in written forms of the Spanish language. Emphasis on increasing vocabulary, reading, and writing skills through short stories, essays, and guided compositions. CSU/UC

SPAN 39A-39B. Contemporary Spanish American Literature in Translation (3-3)
Lec-3
CR/NC avail.
Advising: Eligible for ENGL 1A
SPAN 39A not prerequisite to 39B
No knowledge of Spanish required
Reading and discussion of representative works in English translation. CSU/UC

SPAN 39A. Contemporary Spanish American literature from the late 19th century to 1940.
SPAN 39B. Contemporary Spanish American literature from 1940 to the present.

SPAN 39C-39D. Spanish Literature in Translation (3-3)
Lec-3
CR/NC avail.
Advising: Eligible for ENGL 1A
SPAN 39C not prerequisite to 39D
No knowledge of Spanish required
Reading and discussion of representative works of peninsular Spanish literature in English translation. CSU/UC

SPAN 39C. Spanish literature from its beginnings through the Renaissance and Golden Age.
SPAN 39D. Spanish literature of the 19th and 20th centuries.

SPAN 41. Culture and Civilization of Spain (3)
Lec-3
CR/NC avail.
Advising: Eligible for ENGL 1A
No knowledge of Spanish required
Aspects and achievements of the culture and civilization of Spain as reflected in its geography, history, language, literature, governmental and social institutions, art, architecture, music, religion, and daily life. CSU/UC
**Speech Communication Announcement of Curricula**

**Certificate in Speech Communication**

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<th>Course</th>
<th>Units</th>
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<tr>
<td>SPCH 12 Fund of Oral Comm</td>
<td>3</td>
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<tr>
<td>SPCH 4 Group Comm</td>
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<tr>
<td>or SPCH 20 Interper Comm</td>
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<tr>
<td>SPCH 1A Elem of Public Spkng</td>
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<tr>
<td>or SPCH 11 Basic Public Spkng</td>
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<tr>
<td>SPCH 3 Argument and Debate</td>
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<tr>
<td>or SPCH 37 Intracolleigate Spch Comp</td>
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<tr>
<td>or SPCH 38 Intercollegiate Spch Comp</td>
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**Announcement of Courses**

**CREDIT, DEGREE APPLICABLE COURSES:**

**SPCH 1A. Elements of Public Speaking (3)**

Lec-3                                             CR/NC avail.

*Advis: ENGL 96 or placement in ENGL 1A*

Training in research, organization, and delivery of extemporaneous speeches. Focus on audience analysis, detailed speech outlining, evidence testing, delivery, and visual aids. CSU/UC

**SPCH 3. Argumentation and Debate (3)**

Lec-3                                             CR/NC avail.

*Advis: SPCH 1A, 11 or 12*

Primary emphasis on argumentation as the study of analysis, evidence, reasoning, refutation and rebuttal, etc. in oral and written communication. Significant component of instruction in oral argumentation. "Critical Thinking" approaches to commercial, legal, political, and academic argumentation and persuasion. CSU/UC

**SPCH 4. Group Communication (3)**

Lec-3                                             CR/NC avail.

*Advis: ENGL 96 or placement in ENGL 1A*

Training in the basic methods and principles of problem solving, leadership, decision making and critical thinking through group communication; methods of inquiry and advocacy for participation in group discussions and presentations. CSU/UC

**SPCH 11. Basic Public Speaking (3)**

Lec-3                                             CR/NC avail.

Discussion of and practice in effectively organizing and presenting ideas in public speaking situations; training and practice in critical analysis and overcoming speaking anxiety. CSU

**SPCH 12. Fundamentals of Oral Communication (3)**

Lec-3                                             CR/NC avail.

An introduction to the theory, basic principles, and methods of oral communication with emphasis on improving speaking and listening skills in the context of interpersonal communication, small group discussion and public speaking. CSU

**SPCH 20. Interpersonal Communication (3)**

Lec-3                                             CR/NC avail.

Focus on the impact communication has on the interaction between individuals in settings including family, friendship, intimate and work situations. Students are expected to demonstrate and apply these skills through individual and group activities. CSU

**SPCH 37. Intracolleigate Speech Competition (3)**

Lec-3, lab-3                                       CR/NC avail.

*Advis: SPCH 1A, 3, 4, 11 or 12*

*Repeat: max. 6 units*

Student competition in intracolleigate forensics tournaments in the following areas: persuasive, informative or impromptu speaking and oral interpretation of literature (prose, poetry, drama, interpreter's theatre). Development of public speaking skills while being a member of a team. CSU

**SPCH 38. Intercollegiate Speech Competition (3)**

Lec-3, lab-3                                       CR/NC avail.

*Advis: SPCH 1A, 3, 4, 11 or 12*

*Repeat: max. 6 units*

Student competition in intercollegiate forensics tournaments in one or more of the following areas: parliamentary debate, cross-examination debate; oral interpretation; informative, persuasive, speech to entertain; communication analysis, impromptu, and extemporaneous speaking; interpretive theater. Development of public speaking skills while being a member of a team. CSU

**Student Leadership Announcement of Courses**

**CREDIT, DEGREE APPLICABLE COURSES:**

**S L 10. Student Government (1)**

Work-2                                             CR/NC only

*Repeat: max. 4 units*

Training in the governance of student activities and representation/advocacy of student concerns. Learning to participate in and chair meetings, allocate funds, and implement agreed upon projects. Students will attend and participate in Associated Student Council meetings, Inter-Club Council meetings, and/or shared governance meetings to receive credit for this course. CSU

**S L 12. Leadership Skills (3)**

Lec-3                                             CR/NC avail.

Examination of the principles of leadership and their application to Associated Students Council, clubs, and activities. Specific leadership skills include chairing meetings, organizing events and campaigns, communicating effectively, working collaboratively, resolving conflicts, balancing priorities, and managing one's time. Leadership styles, functions and approaches will be discussed and evaluated. CSU

**S L 12A. Leadership Skills: Independent Study (3)**

Ind st-54 hrs                                       CR/NC avail.

*Repeat: max. 12 units*

An independent leadership project. CSU
TH A 50. Play Rehearsal and Presentation (1-3)
Lec-3, 6, 9, field trips
CR/NC only
Repeat: max. 12 units
The preparation and interpretive training process that goes into rehearsal and performance presentation in a Theatre Arts Department production. Students must audition for, be cast in, rehearse and perform in the plays in order to receive credit. CSU/UC

TH A 101. Beginning Acting (3)
Lec-3
Repeat: max. 9 units
Examination, practice and execution of the fundamentals of acting. Staging techniques, improvisation, theatre games, stage movement, and introduction to acting terminology. Classroom presentation of scenes and monologues. CSU/UC/CAN
Formerly TH 10A

TH A 102. Character Development and Scene Study (3)
Lec-3
Advise: TH A 101
Repeat: max. 9 units
Analyze, develop and create believable characters, and portray them in class. Concentration in studying scene evolution from selected plays. CSU/UC
Formerly TH A 10B

TH A 103. Performance Projects (3)
Lec-3
Advise: TH A 101 and 102 or demonstration of exit skills
Repeat: max. 9 units
Development of class projects and workshops that will be performed in a studio setting. Investigation of the development of performance skills as they relate to the audience and to specific studio space. CSU/UC
Formerly TH A 10C

TH A 104. Survey of Classical Drama (3)
Prereq.: Eligible For ENGL 96
Lec-3
An introductory survey to the world's great classical plays. Investigates Greek, Roman, Medieval, Renaissance, and 18th century pieces. CSU/UC

TH A 105. Survey of Modern Drama (3)
Lec-3
Prereq.: Eligible For ENGL 96
An introductory survey to the world's great modern plays. Begins with Henrik Ibsen and explores world trends in playwriting and performance to the present times. CSU/UC

TH A 107. Directing for the Theatre (3)
Lec-3
Advise: TH A 101, 102, or 103 or demonstration of exit skills
Repeat: max. 9 units
Examination of the function of a stage director and the techniques of stage direction with opportunities for practical experience. CSU/UC
Formerly TH A 7
TH A 116. Acting for the Camera (3)
Lec-3, lab-4, field trips
Advising: TH A 101, 102 or demonstration of exit skills
Repeat: max. 12 units
Development of performing skills for video, film and electronic media applications with emphasis on dramatic characterization in a production context. CSU/UC
Formerly TH A 16

TH A 121. Improvisation for Actors (3)
Lec-3
Repeat: max. 9 units
An acting class focusing on the creation of original material by the performers for presentation through the techniques of improvisation and scenario. Actor generated narrative and playcripts developed by the actor in an ensemble environment. CSU

TH A 123. Vocal Production and Audition (3)
Lec-3
Advising: TH A 101
Repeat: max. 12 units
Introduction to the anatomy and physiology of the vocal mechanism. Development of voice and articulation with an emphasis on Standard American English for the stage to develop the actor's process in preparation for audition, selection of materials, and presentation of self in various audition settings. CSU
Formerly TH A 23

TH A 124. Physical Comedy, Masks and Clowning (3)
Lec-3, field trips
Prereq.: TH A 101
Repeat: max. 9 units
Development of the acting skills focusing on clowning; the creation and use of masks, with special attention to the physical characteristics of comic acting and an introduction to circus skills. Topics include the origins and uses of masks, tragic and comic masks, the fool and origin of the clown, and the performer's historical uses of these acting tools. CSU

TH A 129. Storytelling (3)
Lec-3, field trips
Advising: TH A 101
Repeat: max. 9 units
Development of the acting skill of storytelling through performance exercises, improvisations, and uses of the literature of folklore, myth, and monologue focusing on narrative, creation of character, and the telling of stories. CSU

TH A 145. Multimedia in Performance (3)
Lec-3, lab-3, field trips
Prereq.: IDST 120
A survey course that combines the history of live performance, including movement, dance, acting, properties, special effects and scenic elements, with the computer in its many facets, including electronic music, digital sound, computerized lighting, rear screen projections, and video and slide enhancements in three dimensional space. CSU

TH A 200. Theatre Production (3)
Lec-3, lab-3
Repeat: max. 12 units
CR/NC avail.
Instruction and practical experience in stage scenery construction, stage properties selection, lighting execution, sound design and stage management through participation in theatre productions. CSU/UC
Formerly TH A 2A-2B-2C

Related Course
MUS 44. Music Theatre Workshop (3)
Lec-6, field trips
CR/NC avail.
Repeat: max. 9 units
An opportunity for students interested in musical theatre to study, rehearse, and participate in performances of musical works for the stage. Equal emphasis given to the musical and dramatic elements involved in such productions. For staged, public performances, roles may be assigned subject to audition. CSU

The following courses in other departments will be helpful to those interested in theatre: BCST 115, 140; IDST 38; SPCH 38; and Physical Education courses in fencing, modern and folk dance, and ballet.

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**Trade Skills**

**Announcement of Curricula**

All courses offered by the Trade Skills Department are without college credit.

Apprenticeship courses may be found under "Apprenticeship" in this section of the Catalog. Subject areas in Trade Skills may require a special materials fee. Check with the Department office.

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**Building Operation - Maintenance and Repair**

Length of the program is 800 hours. Of these hours, 525 hours are core courses and the remaining hours must be from the elective courses listed below.

Core courses must be taken in the first two semesters of study.

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIAP 9501 AC Electricity I</td>
<td>105</td>
</tr>
<tr>
<td>TIAP 9502 AC Electricity II</td>
<td>105</td>
</tr>
<tr>
<td>TIEE 9572 DC Electricity</td>
<td>105</td>
</tr>
<tr>
<td>TIXX 9503 Boiler Theory, Oper &amp; Maint</td>
<td>105</td>
</tr>
<tr>
<td>TIXX 9571 AC Electricity</td>
<td>105</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>525</strong></td>
</tr>
</tbody>
</table>
Electives (select 3)
TICU 9550 Custodial Training ......................... 105
TIEE 9573 Electronic Basic Controls ................ 105
TIEE 9574 National Electric Code ................... 105
TIXX 9504 Instruments for HV & AC .................. 105
TIXX 9505 Plumbing Code (NPC) ...................... 105
TIXX 9701 Haz Mats Training .......................... 105
LAIR 9809 Labor Rel in Select Indus ................ 105
Total .................................................... 735

Grade requirements: Students must have 85% of the required hours for the certificate with a grade of C or better.

Business Machine Technology
Computerized Machine Technology
Program Goal. Prepares students for employment in the maintenance and servicing of business equipment including photo-copiers and computer-oriented electronics.

Admission Requirements. 10th grade level reading, writing and math skills. For more information call 550-4308.

Length of Program. Two semesters
Core Course Hours/Weeks
TIBM 9543 Computerized Mach Tech ............... 25/35

Requirements for Completion. Successful completion of all courses with a C average or higher and minimum of 80% attendance.

Construction Trade
Length of the program is 800 hours. Of these hours, 601 hours are core courses and the remaining hours must be from the elective courses listed below.

Core courses must be taken in the first two semesters of study.

Core Courses Hours
TIDR 9564 Mechanical Drawing - All Levels .......... 180
TIXX 9699 Furnituremaking and Woodworking ........ 108
TIXX 9704 Intro to Constr Trades, A .................. 72
TIXX 9705 Intro to Constr Trades, B .................. 72
TIXX 9706 Intro to Constr Trades, C .................. 72
TIXX 9708 Carpenter Framing (Rough) ................. 105
Total .................................................... 601

Electives
TIDR 9567 Intro to Comp Aided Draft ................ 175
TIDR 9568 Blueprint Reading, Constr ................ 105
TIEE 9574 Nat'l Electrical Code ...................... 105
TIXX 9505 Nat'l Plumbing Code ....................... 105
TIXX 9701 Haz Mat's Handling ........................ 105
TIXX 9707 Ext & Int Finishes ......................... 105
LAIR 9809 Labor Rel in Select Indus ................ 105

Information:

Electronics Technician
Program Goal. Prepares students for entry-level employment as electronics technicians or Radio-TV service or repair persons. Curriculum includes fundamentals of electricity, electronic equipment, occupational safety, electric and electronic circuits, relays, test equipment, vacuum tube circuits, television and VCR repair.

Admission Requirements. High school diploma, GED, or high school proficiency certificate and demonstration of 8th grade reading, math, and language level. For more information call 550-4380.

Core Course Hours
TIEE 9572 D.C. Electricity ........................... 108
TIEE 9571 A.C. Electricity ............................ 108
TIEL 9590 Electronic Theory & Tech .................. 216
TIRT 9666 TV Service Repair: Fund ................... 108
TIRT 9667 TV Service Repair: Adv & VCR .......... 108
SECY 9556 Bus Math .................................... 90
Total .................................................... 738

Industrial Machinery
Industrial Maintenance Mechanic
Program Goal. Preparation for entry-level employment in the mechanical trades. Curriculum includes industrial mechanics, blueprint reading, electricity, sheet metal, basic machining, welding, tool identification, precision measuring instruments, hydraulics, pneumatics, shop safety, and shop math. For more information call 550-4380.

Admission Requirements. None

Core Course Hours
TIIIM 9641 Ind Maint Mech ............................ 4 x 270 hr
Total .................................................... 1,080

Elective Courses. To be discussed with counselor.

Requirements for Completion. Completion of required hours with a grade of C or higher.

Trade Skills
Announcement of Courses

NONCREDIT COURSES:

Appliances
TIAP 9500. Gas Appliance/Valve Control
Skills, knowledge and practices for the safe installation, maintenance, repair and operation of natural gas appliances and combustion devices.

TIAP 9501. Refrigeration/Air Conditioning I (105 hrs)
Advisement: GED 2105 or equivalent
Introductory course in the theory and fundamental operations of the refrigeration system, components and electrical controls. Preparation for continuing to Refrigeration and Air Conditioning II.
TIAP 9502 Refrigeration/Air Conditioning II (105 hrs)
Advisory: TIAP 9501 or equivalent
Intermediate course in the troubleshooting of the operations of commercial and automotive refrigeration systems, components and electrical controls. Preparation for employment in the Stationary Engineering Apprenticeship, HVAC maintenance helper or utility person.

Business Machine Technology
TIBM 9543. Computerized Machine Technology/Electronics (225 hrs)
Advisory: ABE 2070 and 2074
DC and AC circuits, semiconductors, digital hardware, machine level programming, and a proficiency in microcomputer software.

TIBM 9550. Introduction to Office Machine Repair
Advisory: ESLN 3700
An overview of the principles and fundamental concepts of electronics and mechanics, as related to office machine repair. Includes use of tools, use of scientific calculator basic math for electronics, overview of AC/DC and digital electronics, circuit building and testing, use of voltmeter and oscilloscope, and use of computers.

TIBM 9551. Introduction to Copier Repair
Advisory: ESLN 3700
Introduction to the concepts, terminology, components, schematic reading, troubleshooting and repair of modern microprocessor controlled photocopiers. Includes hands-on labs and use of tools.

TIBM 9553. AC/DC Electronics - Introduction (105 hrs)
Advisory: TIBM 9550 and ESLN 3700
A lecture/lab course in which the students learn the fundamentals of series and parallel circuits, theory of current and voltage, identification and use of resistors, capacitors and inductors. Hands on experience building circuits and taking current and voltage measurements using meters and oscilloscopes.

TIBM 9554. Solid State Electronics - Introduction
Advisory: TIBM 9553
A lecture lab course exploring the operation and design of semiconductor electronics devices. Timing and control circuits with industrial applications will be designed and constructed.

TIBM 9555. Digital Electronics Introduction
Advisory: TIBM 9550 and ESLN 3700
Theory and construction of basic digital circuits, including gates, counters, shift registers, encoders and decoders, arithmetic and memory elements in small scale integrated circuits. Number systems, Boolean algebra and digital troubleshooting will also be discussed.

TIBM 9556. Microprocessor Concepts
Advisory: ESLN 3700
A lecture/lab course using model 6502 microprocessor trainers to demonstrate universal and practical concepts of microprocessor operation and assembly language programming. Both software and hardware elements will be introduced.

TIBM 9557. Microcomputer Repair Introduction
Advisory: TIBM 9558 and ESLN 3800
The theory and operation of the IBM PC and compatibles from a technical point of view. Assembly, maintenance, troubleshooting and simple repairs of PC components and peripherals including keyboard, disk drives, and power supplies. Voltmeter, scope and software diagnostics programs will be used to troubleshoot simple repairs.

TIBM 9558. Introduction to Computers - Technical
Advisory: SECY 9388 and ESLN 3700
Introduction to the operation of the IBM PC computer, including microcomputer architecture, DOS, BASIC, microprocessor differences, utilities diagnostic routines, and applications programs. Students must plan to spend additional time in the computer labs in order to gain proficiency.

TIBM 9559. Build a Clone Computer (105 hrs)
Advisory: ESLN 3700
A step by step description and demonstration of all procedures necessary to select, purchase, assemble, configure, test and maintain an IBM PC compatible system built from component parts.

Construction
TIXX 9704. Introduction to the Construction Trades A
(72 hrs)
Recommended for non-traditional and re-entry students
Basic knowledge and skills necessary in the construction trades. Identification of tools and building materials and how to handle them safely. Becoming acquainted with the variety of trades and apprenticeships in construction and with the roles of people on building projects and how the building team relies on project plans and specifications for information. Completion of several small projects in wood and concrete requiring use of measuring, hand, and power tools.

TIXX 9705. Introduction to the Construction Trades B
(72 hrs)
Advisory: ABE 2074 or ESLN 3800: TIXX 9704
Recommended for non-traditional and re-entry students
Additional basic knowledge and skills necessary for the construction trades. Further identification of tools and building materials and how to handle them safely. Completion of several small projects in carpentry, electricity, plumbing, and sheet metal requiring use of measuring, hand, and power tools.

TIXX 9706. Introduction to the Construction Trades C
(72 hrs)
Advisory: ABE 2074 or ESLN 3800: TIXX 9705
Recommended for non-traditional and re-entry students
Additional basic knowledge and skills for the construction trades. More identification of tools and building materials and their safe handling. The roles played by the people that build a project and how the team relies on project plans and specifications for information. Completion of several small carpentry, drywall, painting, and waterproofing projects using measuring, hand, and power tools.
TIXX 9707. Exterior and Interior Finishes (105 hrs)
Advis: ABE 2074 or ESLN 3800
Introduction to the tools, materials, and processes used in finishing exterior and interior surfaces. Projects include installation, tapping, and texturing of drywall; application of plaster, installation of flashing and roofing materials, installation of ceramic and resilient tile, and the selection and application of paint and related products. Also includes safe use of ladders, scaffolding, and personal safety equipment and how to read and interpret material safety data sheets.

TIXX 9708. Carpentry Framing (Rough) (105 hrs)
Skills and modern techniques to do framing construction to industry standards. Emphasis on blueprint reading; appropriate tools, machines, and equipment; and framing techniques for floors, walls, ceilings, and roofs. Light frame construction for pre-apprentices and/or do-it-yourself persons.

Custodial
TICU 9550. Custodial Training (108 hrs)
Preparation for employment in the custodial field. Areas include floor care, custodial tools, equipment, methods, supplies, and custodial terminology.

TICU 9553. Carpet Care (108 hrs)
Advis: TICU 9550 or equivalent
Extensive discussion on carpets. Subject areas include: history of carpet, methods of carpet construction, identification of fibers, chemistry of cleaning, soilng, carpet and upholstery cleaning methods, techniques of dyeing, and topical treatment. Involves hands-on practices.

TICU 9554. Basic Custodial Skills (48 hrs)
Basics of custodial cleaning skills. Foundation in the chemistry of cleaning, cleaning supplies, material and equipment, floor cleaning machine, mopping techniques, restroom care, dusting, wall washing, commercial office cleaning, work safety, union role in custodial industry.

Drafting
TIDR 9564. Mechanical Drawing - All Levels (180 hrs)
Advis: ABE 2074; ESLN 3500
Practical skills and theory needed for drafting and their applications in industry. Includes instrumental drawing, lettering techniques, freehand sketching, multiview and pictorial projection, dimensioning techniques, development and layout, and working drawings.

TIDR 9565. Mechanical Drawing I (180 hrs)
Introduction to drafting. Emphasis on mechanical/machine applications. Topic areas include conventional lines, lettering technique, freehand sketching, instrumental drawing, orthographic projection, and dimension techniques.

TIDR 9566. Mechanical Drawing II (180 hrs)
Advis: TIDR 9565
Development of drafting skills. Emphasis on mechanical/machine applications of working drawings including details and assembly. Includes sectional and auxiliary views, graphic primary revolutions, review of dimensioning techniques, isometric, oblique, and perspective projections, intersections and development layouts. Includes use of computer-aided drafting.

TIDR 9567. Introduction to Computer Aided Drafting (CAD) (180 hrs)
Concepts and operation of visual engineering drawing preparation using a computer. Common ways used for initial data entry will be studied. Includes alphanumeric keyboard, graphics tablet, and mouse using Auto CAD software. Common methods to retrieve programs and store drawings will be used. Assignments accomplished with conventional drafting techniques.

TIDR 9568. Blueprint Reading (Construction)
Basic print reading of construction drawings. Includes print reading basics, materials and specifications; print reading; estimating; and symbols and abbreviations.

Electricity and Energy Conservation
TIEE 9571. Electrical AC Electricity (108 hrs)
Basic knowledge and skills necessary to enter basic electronics and telecommunications programs. Introduction to the principles of AC electricity, motor theory and generators, and analysis and construction of electronic circuits using induction, capacitors, relays, and resistors. Laboratory includes the operation of signal generators, power supplies oscilloscopes, and VTVMs.

TIEE 9572. DC Electricity (108 hrs)
Advis: ESLN 3800
Study and practice of direct current electricity including applied mathematics, recommended safety practices and a conceptual approach to direct current electricity.

TIEE 9573. Electrical Basic Controls
Further development of knowledge and skills necessary for promotion in the electrical industry. Fundamentals of controls, control of motor study, control components, pilot devices, control circuit diagrams, analysis of control equipment, DC circuit development, and static control.

TIEE 9574. Electrical Code
The application of the municipal code of rules and regulations necessary for electrical workers. Include permit procedures, enforcement and inspections, general technical requirements, approved locations, and brand circuits.

TIEE 9575. Energy Conservation/Management
Recent trends and techniques in the field of energy and its management. Saving money through energy conservation, denoting changes in heating, cooling, and lighting, and setting up an energy-conservation program at work.
### Electronics
**TIEL 9590. Electronics I Theory and Technology**
Presentation of solid state theory: diodes, zeners, LEDs, transistors, FETs, SCRs, and ICs. Circuit analysis using solid state theory will be applied to power supplies (half wave, full wave, regulated) and audio amplifiers. This course will include the construction of circuits and the analysis and problem-solving of their functions using laboratory test equipment.

**TIEL 9592. Electronics 2**
Topics include tuning, coupling, and filtering circuits; frequency response of amplifiers; modulation and demodulation; fundamentals of logic; integrated circuits and types and sources of wave forms.

**TIEL 9594. Digital/Computer Electronics**
*Advised: ABE 2074 and 2075*
An introduction to computers which make use of digital logic. Emphasis on the technical aspects of logic circuits for computers rather than programming. Simple logic gates are expanded into counters, memories, registers, and arithmetic units as utilized in computers. Units are adapted to show the structure of microcomputers and microprocessors.

### Industrial Machinery
**TIM 9640. Machine Shop Practices**
Use of hand tools and measuring devices, shop safety, drawings, blueprints, shop mathematics, precision tools, power saws, bench work and operations, drill press, lathe, milling machine, grinders and other general machine shop tools, devices and equipment.

**TIM 9641. Industrial Maintenance Mechanics**
*Advised: ESLN 3800; ABE 2074*
Preparation for entry-level employment in the mechanical trades. Instruction includes: mechanics, blueprint reading, electricity, sheet metal, gas welding, tool identification, precision measuring instruments, hydraulics and pneumatics, shop safety, and shop math.

**TIM 9644. Industrial Maintenance - Introduction**
*Advised: ESLN 3800; ABE 2074*
Introduction to electro-mechanical trades, including topics such as electricity, mechanics, welding, blue print reading, machining and shop safety.

### Police Officer
**TIP0 9647. Police Training Reserve and Limited Peace Officer**
*Advised: ABE 2074*
Training for limited peace officers (probation officers) with the power to arrest in accordance with their position. Meets the minimum standards established by the California Commission of Peace Officers Standards and Training. Includes basic criminal law, laws of arrest, methods of arrest, search and seizure, and discretionary decision making.

### Radio and Television Repair
**TIRT 9666. TV Service/Repair - Fundamentals (108 hrs)**
Television servicing and repairing including basic electronics for television, television receivers, use of test equipment and practices for troubleshooting in television servicing and repairing and the adjustment of television sets. Units of instruction include; scanning and synchronizing, video signal picture carrier signal, television receivers, picture tube, power supplies, video circuit, color and auto circuit, sound and others.

**TIRT 9667. TV Service/Repair - Advanced and VCR (108 hrs)**
Study of and practice in the advanced theory of checking, analyzing, servicing and repairing TV's and VCR's, troubleshooting methods, analyzing circuits and voltages, transistor testing and solid-state servicing, color set adjustments, remote control special effects and features systems, controls and others.

### Sanitation
**TISA 9670. Cross-Connection Control**
Backflow, rules, regulations, and methods of backflow prevention, and components of a cross-connection control system.

### Other Specialty Courses
**TIXX 9503. Boiler Theory, Operation, and Maintenance (105 hrs)**
*Advised: High school diploma, GED, or H.S. proficiency certificate and demonstration of 8th grade reading, math, and language ability*
Basic principles of boiler operation, maintenance, and safety procedures for stationary engineers at the pre-apprenticeship level.

**TIXX 9504. Instrumentation for Measurement and Control of HV and AC (106 hrs)**
*Advised: ESLN 3700*
Introduction to standard methods for measuring HVAC variables such as temperature, pressure, and flow. Includes continuous and on/off control instruments, feedback loop importance, and reference to blueprints and appropriate standards. Emphasis is on electronic and pneumatic methods commonly used in building service trades. Introduction to Energy Management System (EMS) concepts and methods.

**TIXX 9505. Plumbing Code (N.P.C.) (111 hrs)**
Covers the plumbing code, the plumbing system, isometric drawings used in the trade, the drainage system, the vent system, traps, clean-outs, DWV materials, the water distribution, valves, faucets, hot water, and gas systems. Also includes maintenance and repair of plumbing fixtures, blueprint reading, and use of the Uniform Plumbing Code.

**TIXX 9686. Fire Safety Director Training**
*Advised: ESLN 3600; ABE 2074*
Presentation of good fire prevention and emergency behaviors related to large structures. Topics include a pre-disaster safety plan, communicating to occupants, human behaviors in disaster situations, fire safety organization guide, and codes and ordinances for fire and other disaster safety.
TIXX 9699. Furnituremaking and Woodworking (108 hrs)
Principles of wood fabrication, emphasizing furniture construction, hand tool and machine basics, shop safety, design, wood joinery and finishing for the beginning woodworker.

TIXX 9700. Health and Hygiene for Stationary Engineers
Health, hygiene and related safety practices for stationary engineers in six areas: pest control, drinking water, sewage laden equipment, infectious wastes, body substances and food services.

TIXX 9701. Hazardous Materials Training
The study of regulatory requirements, concepts, practices, tools and pieces of equipment for protecting workers from exposure to toxic substances and hazardous materials in general industry.

NONCREDIT COURSES:

ABE 2003. Vocabulary and Spelling (36-180 hrs)
Designed to increase vocabulary and improve spelling skills. Some basic grammar included.

ABE 2035. Individualized Reading and Writing (54-450 hrs)
A basic reading and writing individualized program. Instruction is open entry and open exit and self-paced to meet students’ individual needs. Emphasizes comprehension and study skills and will prepare students for further educational and/or job demands.

ABE 2059. ABE/Pre-GED Preparation (54-180 hrs)
Writing, reading and mathematics skills development from intermediate through pre-GED level. Prepares the student to enter GED 2105. Self-paced, individualized or small group instruction. Offered in Spanish at Mission Campus.

ABE 2070. Math Skills Development 1 (36-180 hrs)
Addition, subtraction, multiplication, and division of whole numbers and their application to everyday situations. Introduction to number theory, measurement, basic geometry, and elementary algebra.

ABE 2071. Math Skills Development 2 (36-180 hrs)
Study of decimal and common fractions, percents, basic algebra and geometry. Applications with measurement, graphic representations and development of critical thinking through word problems in functional contexts. Competency based.

ABE 2072. Oral/Written Communication 1 (36-180 hrs)
Initiates development of oral and written comprehension. Students will apply these skills to everyday life situations. Students will read pertinent text as a springboard for oral discussion and written assignments. Competency based.

ABE 2073. Oral/Written Communication 2 (36-180 hrs)
Interpersonal communication through listening, speaking, writing, and reading. Using literature, art, newspapers, film and music, students explore American culture(s) and society. Reading and writing competencies stressed.

ABE 2081. Basic Skills Lab (36-540 hrs)
Advis: ESLN 3500 or 3505
Reading, writing, and communication skills to prepare students for high school courses, GED, entry into the workplace, vocational and retraining program. Self-paced, competency based individualized and small group learning with teacher, tutor, and computer assistance.

Adult Basic Education - Vocational NONCREDIT COURSES:

ABEV 2074. On the Job Communication Skills (54-180 hrs)
Development of listening and responding skills and other interpersonal communication skills needed for success on the job. Includes resume writing and interview practice, and introduction to on-the-job work standards and employer expectations.
ABEV 2078. Choices and Success on the Job (36-180 hrs)
Promotes student self-assessment in career choice, skills assessment, resume writing, interviewing techniques and work ethics.

ABEV 2090. Literacy Tutor Training (12 hrs)
Instructional techniques in basic reading and writing including demonstration and practice. Includes student assessment, progress evaluation and choosing instructional materials. Designed for volunteers and paraprofessionals who will be tutoring adult students in literacy skills.

ABEV 2091. Graphic Arts Academics (36-180 hrs)
Academic and vocational instruction that offers a study of mathematics, science, and vocabulary as it relates to the field of graphic communications. Prepares students for entry into the Graphic Communications program.

ABEV 2092. Vocational Foundation Skills (36-180 hrs)
Competency-based course designed to support student academic success in vocational programs. Focus is on the foundation skills of reading, writing, math and study skills.

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**General Education Development (GED)**

GED (High School Equivalency). Preparation for the five GED test areas of Literature, Mathematics, Science, Social Studies, and Writing is offered in English and Spanish.

**Requirements for Completion.** Passing the GED test battery with an average standard score of 45 and no single test score below 40.
Offered at the following campuses:
- Preparation in Spanish is offered only at the Mission Campus.
  - Adult Learning Center, 241-2300
  - Mission, 550-4417
  - Southeast, 550-1300

**NONCREDIT COURSES:**

GED 2105. GED Preparation (54-180 hrs)
*Adviser: ABE 2059*
Prepares the student to pass the five GED tests: Writing, Social Studies, Science, Literature and Mathematics. Individual and/or small group instruction. Offered in Spanish at Mission Campus.

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**Academic Skills Development**

ABE 2069. Math Skills Lab (36-180 hrs)
Individualized instruction in basic mathematics including whole numbers, fractions, decimals, percents, measurement, and introduction to algebra and geometry. Applications to life and workplace skills are integrated into this open entry, open exit, and competency based, self-paced course.

ABE 2083. Success in College (8-25 hrs)
Tools for students to succeed in the educational setting. Emphasis is on combining use of resources and skills with suggestions for techniques that lead to success in school.

**HSEN 2250. Grammar/Composition/Literature (55-180 hrs)**
*Adviser: CASAS Score of 225*
Essentials of English grammar, usage, and writing. Survey of basic forms of English and American literature. Written reports with emphasis on paragraph development, punctuation, and spelling.

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**High School Studies**

**Adult High School Diploma**
*(John Adams Campus, 561-1900)*

**Plan I**

**Core Courses:**
- English
- Mathematics
- Social Science (U.S. History, World History, Culture, Geography, Civics, Economics)
- Science (Biological, Health, Physical)
- Visual or Performing Arts or Foreign Language
- Additional requirements

**Requirements for Completion—Plan I**
1. Completion of 180 high school credits. (Some may be transferred from another school). At least 15 of the high school credits must be earned in residence.
2. Passing the Adult High School Diploma Proficiency Tests (Reading, Mathematics, Writing)

**Plan II**

**Core Courses:**
- Civics
- History
- Additional requirement
- A GED Certificate
  Requirements for Completion—Plan II
1. Completion of 25 high school credits (15 of which must be earned in residence).
3. The GED Certificate.

In the Adult Competency Education (ACE) Learning Center, the method of awarding high school credit is different from regular classes. In ACE, awarding of credit is based upon demonstrated competency, not on attendance. With the assistance of instructors, students learn at their own pace using individualized learning materials.

Students may study core courses for Plan I and for Plan II in regular classes or in the Adult Competency Education (ACE) Learning Center using individualized materials.

Additional requirement to be chosen from these options: Career Awareness, College Preparation, Computer Applications, Income Management, Testing Preparation.

For information on GED testing and assessment, see “GED Testing and Assessment Center.”
NONCREDIT COURSES:

Adult Competency Education (ACE)
HSLB 2700. ACE High School Lab (54-810 hrs)
Adviser: CASAS Score of 225
A competency-based, self-paced lab offering all required high school courses. Subject areas and objectives vary for each student according to previously acquired high school credit and student's goal. Emphasis is on the development of independent, critical thinking skills applied to each subject. Career Development

HSCA 2150. Career and Income Management (90 hrs)
Adviser: CASAS Score of 225
Career awareness, job search, and job retention. Employment development and income management. Emphasizes necessary reading, oral and written communication, workability, and interpersonal skills needed to become and stay employable. SCANS competencies are integrated into the curriculum. Satisfies high school requirement in Career Awareness. Civics

HSCI 2204. Civics 1 (54-180 hrs)
The Constitution, the rights and responsibilities of citizens, elections, and the party system. Introduces students to a practical understanding of the law.

HSCI 2205. Civics 2 (54-180 hrs)
Adviser: ABE 2074
Purpose, structure, and function of our state and local governments with emphasis on understanding current economic, social and political issues at the state and local levels. Develops the ability to listen to varying points of view. Emphasis on participation in the democratic process.

Economics
HSEC 2225. Economics (36-180 hrs)
Basic economic principles and their applications to the free enterprise system. Economic concepts applied to students' personal financial decisions.

English
See Academic Skills Development.

History
HSII 2351. United States History 1 (90 hrs)
Adviser: ABE 2073
U.S. History up to the Civil War, emphasizing the influence of past events on the present. Analysis of historical cause and effect from political, social, and economic viewpoints.

HSII 2352. United States History 2 (90 hrs)
Adviser: ABE 2073
History of post Civil War America, emphasizing the influence of past events on the present. Analysis of historical cause and effect from political, social, and economic viewpoints.

Science
HSSC 2565. Physical Science (54-180 hrs)
Study of how people are influenced by the physical world. Includes climate, the ocean, natural events, natural resources, the Earth's relationship to the sun and moon, and the effects of population on the Earth. Current events analyzed using course concepts.

Women's Studies
Announcement of Courses

CREDIT, DEGREE APPLICABLE COURSES:

WOMN 10. Women and Film (3)
Lec-3
CR/NC avail.
A brief history of the development of feminist film studies. Once outlined, this approach is applied to Hollywood cinema to demonstrate how movies reflect and shape notions about women and their roles in society. Significant examples of films made by women in resistance to patriarchal images are also screened, accompanied by readings by prominent feminist theorists. CSU/UC

AFAM 60. The African American Woman in the United States (3)
Lec-3
The Black woman in America from 1619 to the present. Particular emphasis on contributions she has made to the society. CSU/UC

ANTH 25. Culture, Gender and Sexuality (3)
Lec-3
CR/NC avail.
An examination of the cross-cultural and historical factors that determine how women and men understand and act out their gender and sexuality. Focus on women's role in non-western cultures such as Native American, Moslem, African and Asian societies. Various aspects of culture which affect both female and male status, such as economics, religion, family and marriage, and sexual practices, will be examined in detail. CSU/UC

ART 108. Women through Art History (3)
Lec-3, field trips
Note: The study of art history requires college-level reading comprehension.
A study of women in art, investigating their place in society as artists, and patrons, as well as subjects in art. The course will introduce women from both European and non-European cultures from prehistory to the present. All art will be discussed from both a critical and historical perspective, with regard to a social context and formal visual elements. CSU/UC

ASAM 35. Asian American Women (3)
Lec-3
Examination of the lives of Asian American women, using a multi-disciplinary approach which includes literature, poetry, history, political science, anthropology and sociology. Readings, papers and discussions on the social, cultural, political and economic conditions facing Asian American women. Field trip may be required. CSU/UC
BCST 105. Women and Mass Media (3)
Lec-3, field trips
An exploration of the mass mediated messages—radio, television, film, and print—about women. A critique of roles given women. An update on opportunities for women in each of the mainstream and alternative media industries. CSU

ECON 25. Women in the Economy (3)
Lec-3 CR/NC avail.
An introduction to women’s roles in the U.S. economy, including varying experiences related to race, ethnicity, and class. Examines women’s occupations and earnings; women’s household activities and how they affect paid work; women as consumers; public policy regarding women’s work and poverty; and current special topics. Applies and contrasts mainstream political economic theories within a feminist perspective. CSU

ENGL 1A. University-Parallel Reading and Composition (3)
Lec-3
Some sections of ENGL 1A are taught from a feminist perspective. For further information about these sections, see the Chair of Women’s Studies. CSU/UC

ENGL 37. African American Women in Literature (3)
Lec-3 CR/NC avail.
An intensive examination of the literary efforts of African American women writers beginning with the Slave Narratives to the present. CSU/UC

ENGL 57. Women and Literature (3)
Lec-3, field trips CR/NC avail.
Prereq.: ENGL 96 or Placement in ENGL 1A
Literature by women: reading, discussion, and analysis of literature written in English by women over the last four hundred years. Emphasis on the nineteenth and early twentieth century novel, including some poetry and drama; classical as well as new and re-discovered authors. CSU/UC

ENGL 58A. Contemporary Women Writers and Poets (3)
Lec-3, field trips CR/NC avail.
Prereq.: ENGL 96 or Placement in ENGL 1A
Contemporary women writers and poets: reading, discussion, and analysis of fiction, poetry and drama written in English by contemporary women from diverse cultural and ethnic backgrounds. Works in translation may be included. CSU/UC

GLST 21. Issues in Lesbian Relationships (3)
Lec-3 CR/NC avail.
Exploration of the history, culture, and psychological dynamics of lesbian relationships. Emphasis on the central issues of intimacy and commitment as well as the sociological effect of homophobia and minority status within the lesbian dyad. CSU

GLST 30. Issues in the Lesbian Community (3)
Lec-3 CR/NC avail.
Historical analysis and examination of issues central to the development of lesbian identity, culture, and relationships; exploration and debate of current controversial issues in the political, social, and personal realms of lesbian experience. CSU/UC

HLTH 25. Women’s Health Issues (3)
Lec-3, field trips CR/NC avail.
Advis. Eligible for ESL 82
A health class emphasizing the empowerment of each woman in the pursuit of her physical, mental, social and political health. Aimed at meeting the needs of women of diverse ethnic backgrounds and sexual orientations. Topics include: breast self-exam, menstrual health, reproductive management, motherhood, AIDS and STDS, menopause, violence against women, stress, nutrition, exercises, alternative health, and more. Course work involves research on personal health concerns. CSU/UC

HLTH 26. Women’s Health: Advanced Issues (3)
Lec-3, field trips
Advis. HLTH 25, 27 or 53; and eligible for ENGL 94
In-depth analysis of women’s health issues chosen for particular relevance to CSUF students. Focus on public policy and advocacy, emerging trends and careers in women’s health, access to diverse health care modalities, and current controversies. CSU

HIST 12A-12B. Women in American History (3-3)
Lec-3 CR/NC avail.
An in-depth study of the experiences, roles, and contributions of women in the political, economic, social, and cultural developments of the United States. CSU/UC

HIST 12A. From the pre-colonial period to the end of the Civil War.
HIST 12B. From the end of the Civil War to the present.

HUM 25. Women in the Arts (3)
Lec-3, field trips CR/NC avail.
Examination of the creative process by studying the history of women in the arts from pottery, ritual chants, and story telling to painting, sculpture, jazz, novels, and performance art. Recognized “greats” as well as anonymous women of diverse cultural and ethnic backgrounds. Films, tapes, slides and a field trip to complement class lectures and discussions. CSU/UC

IDST 23. African American Women in the Creative Arts (3)
Lec-3
An intensive examination of the creative efforts of African American women artists and writers from 1753 to the present. CSU/UC

IDST 51-52-53. Current Topics in Women’s Studies (1-2-3)
Lec-1,2,3
Repeat: if no subject repeat
An interdisciplinary approach to current issues and concerns of women in a variety of areas, such as health, history, and sexuality. CSU/UC

IDST 54. Politics of Sexual Violence (3)
Lec-3, field trips CR/NC avail.
Examination of political and psycho-social causes of sexual violence, its connection to other hate crimes, and strategies for transforming a violent culture through prevention education, with a special emphasis on the healing function of creative expression; field project required. CSU
IDST 55. Ending Sexual Violence: Peer Education (3)
Lec-3, field trips CR/NC avail.
Adviser: IDST 54
Education and skills training in peer education to promote healthy sexual relationships by reducing sexual violence, specifically battery and rape. Peer education activities, geared towards ending sexual violence, are conducted among CCSF students, with volunteer work in community-based organizations; field project required. CSU

IDST 70. Architecture and Diversity (3)
Lec-3, field trips CR/NC avail.
An introductory critical review of the building and design heritage of women all over the world and of indigenous people’s architecture in Africa and Latin America from tribal dwellings to monumental structures, followed by a series of architectural and engineering studios introducing students to basic building and design skills: developing a project, drawing a floor plan, building an architectural model, using drafting tools and computers. Emphasis on hands-on skills. CSU

LABR 78A-78B-78C. Women’s Employment Issues (1-1-1)
Lec-1 CR/NC avail.
These courses may be taken in any sequence
Repeat: max. 3 units if no subject repeats
   LABR 78A. A survey of women’s work in the past and present. Examines the historical evolution of women’s work lives, the impact of family structure, prevailing notions of “women’s place,” labor market opportunities, and trade union organizations. CSU
   LABR 78B. Current issues facing women workers will be discussed. Topics include pay equity, legal rights of women workers, sexual harassment, combining work and family responsibilities and women’s employment issues. CSU
   LABR 78C. Focus on special problems of selected occupational groups such as clerical workers, health workers and women in non-traditional jobs. CSU

LAMS 10. Latinas in the U.S.: Voces (Voices) (3)
Lec-3, field trips CR/NC avail.
The lives and experiences of Latinas living in the U.S. The effects that their experiences have on self-esteem. Multi-disciplinary discussion and analysis of major social and cultural issues and themes. CSU

P E 550. Self Defense For Women (1)
Lec-2
An integrated approach to rape prevention incorporating psychological, physical and preventive skills. CSU/UC

P E 566. Safety Awareness and Defense (1)
Lab-2
Repeat: max. 4 units
Assault prevention and personal defense skills designed to increase safety awareness. Basic physical defense skills are taught with an emphasis on streetwise safety strategies and the psychology of assault prevention. CSU/UC

PSYC 15. Assertive Behavior (1)
Lec-1 CR/NC avail.
Emphasis on cognitive-behavioral theories and their application to assertive behavior. Assertiveness techniques in a variety of situations, including communication with family, friends and work associates. CSU

PSYC 25. Psychology of Sex Differences (3)
Lec-3 CR/NC avail.
Analysis of sex differences from physiological, psychological, and social perspectives; exploration of areas such as abilities, achievement, aggression, attitudes, including the study of concepts of femininity, masculinity, and androgyny. Designed to increase understanding of personal and professional relationships. CSU/UC

SOC 25. Sex and Gender in American Society (3)
Lec-3 CR/NC avail.
How social institutions such as education, family, work, law, etc. affect women and men differently; how gender roles influence self-concept as well as educational opportunities. Examines the contemporary status of all American women, including African American, Latina, and Asian American, in terms of differences and similarities. The strategies, policies, and laws necessary to eliminate sexism from society and to create alternatives for women and men. CSU/UC

NONCREDIT COURSES:
WOMN 9843. Issues of Concern to Women
Contemporary issues of concern to women. Course content varies to include family relations, mental and physical health issues, work-related issues, and self-defense. Focus varies from semester to semester.

Word Processing
For noncredit courses in word processing see the Office Occupations course listings of the Business Department in this section of the Catalog. Also see credit courses in the Business Department listings in this section of the Catalog.