El Camino College
2009-2010

El Camino Community College District
A Public Community College

Serving: El Segundo, Hawthorne, Hermosa Beach, Inglewood, Lawndale, Lennox, Manhattan Beach, Redondo Beach, and Torrance

Address
El Camino College
16007 Crenshaw Boulevard, Torrance, CA 90506-0001

Telephone Numbers
1-866-ELCAMINO or (310) 532-3670
Admissions: (310) 538-5700
Telecommunications for the Deaf: (TDD) (310) 660-3445

Web Site
www.elcamino.edu

2009-2010
Academic Calendar

Fall Semester - 2009

Fall Semester Classes Begin	Saturday	August 29, 2009
Weekday Classes Begin	Monday	August 31, 2009
Labor Day Holiday, Campus Closed	Monday	September 7, 2009
First Day to Apply for Graduation and Certificates (Fall)	Tuesday	September 8, 2009
Last Day to Add (Full Semester Classes)	Friday	September 11, 2009
Last Day to Drop and be Eligible for a Refund	Friday	September 11, 2009
Active Enrollment Census	Monday	September 14, 2009
Last Day to Drop Without Notation on Permanent Record	Friday	September 25, 2009
Last Day to Apply for Graduation and Certificates (Fall)	Friday	October 16, 2009
Mid-Term Classes Begin	Saturday	October 24, 2009
Veterans Day Holiday, Campus Closed	Friday	November 13, 2009
Last Day to Drop with a "W"	Friday	November 20, 2009
Thanksgiving Holidays, Campus Closed	Thurs-Sun	November 26-29, 2009
Fall Semester Ends	Friday	December 18, 2009
Winter Recess, Campus Closed	Thursday	December 24, 2009
	Sunday	January 3, 2010

Winter Session - 2010

Refer to Winter Schedule of Classes

Spring Semester - 2010

First Day to Apply for Graduation and Certificates (Spring)	Monday	January 4, 2010
Lincoln's Day Holiday, Campus Closed	Friday	February 12, 2010
Spring Semester Classes Begin	Saturday	February 13, 2010
Washington's Day Holiday, Campus Closed	Monday	February 15, 2010
Weekday Classes Begin	Tuesday	February 16, 2010
Last Day to Add (Full Semester Classes)	Friday	February 26, 2010
Last Day to Drop and be Eligible for a Refund	Friday	February 26, 2010
Active Enrollment Census	Monday	March 1, 2010
Last Day to Apply for Graduation and Certificates (Spring)	Friday	March 5, 2010
Last Day to Drop Without Notation on Permanent Record	Friday	March 5, 2010
Spring Recess, No Classes	Saturday-Friday	April 10 - 16, 2010
Mid-Term Classes Begin	Saturday	April 17, 2010
Last Day to Drop with a "W"	Friday	May 7, 2010
Memorial Day Holiday, Campus Closed	Monday	May 31, 2010
Graduation	Friday	June 11, 2010
Spring Semester Ends	Friday	June 11, 2010

Summer Sessions - 2010

Refer to Summer Schedule of Classes

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Board of Trustees

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Trustee Area Three

Mary E. Combs
Trustee Area Two

Ray Gen
Trustee Area Four

Nathaniel Jackson
Trustee Area One

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Trustee Area Five

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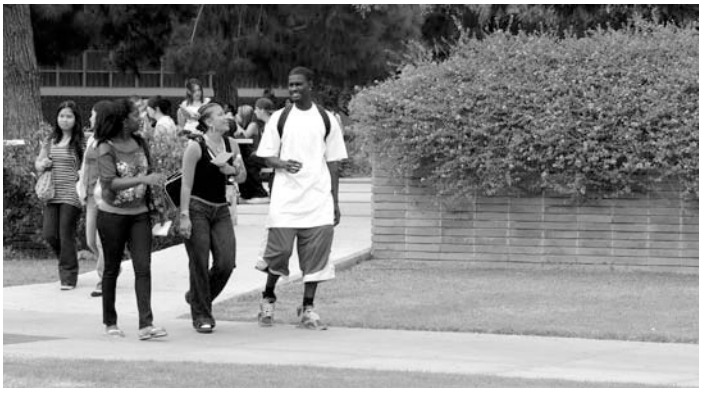
Vice President, Administrative Services

Jeanie M. Nishime
Vice President, Student and Community Advancement

Barbara Perez
Vice President, Human Resources

Accreditation

El Camino College is accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, 10 Commercial Boulevard, Suite 204, Novato, CA 94949-6175, telephone (415) 506-0234, Web http://www.accjc.org, an institutional accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and the U.S. Department of Education. The University of California, the California State University and other colleges and universities give full credit for appropriate courses completed at El Camino College. El Camino College is approved for veterans by the Office of Post Secondary Education, California State Department of Education.



Membership

El Camino College is a member of the Community College League of California.

Open Enrollment

Unless specifically exempted by statute, every course, course section, or class, wherever offered and maintained by the District, shall be fully open to enrollment and participation by any person who has been admitted to El Camino College and who meets such prerequisites as may be established pursuant to Article 2.5 (commencing with Section 55200) of Subchapter 1 of Chapter 6 of Division 6 of Title 5 of the California Code of Regulations.

Certification

The El Camino Community College District hereby certifies that this Catalog is true and correct in content as required by DVB Circular 20-76-84, Appendix P, Paragraph 6(a), Department of Education, State of California.

Campus Police

The Campus Police Office is in charge of the personal safety and security for all who attend classes, as well as all who are employed by El Camino College. Open at all times, the office is located on the corner of Crenshaw and Redondo Beach Boulevards in Parking Lot K. Campus Police offers lost and found services as well as an escort service between parking lots and classes. Also available is first aid as well as help in all emergency situations. The office may be telephoned directly at (310) 660-3100.

Traffic and parking regulations are posted throughout campus. Campus Police will issue citations to violators of these regulations. All such fines are payable to the Campus Police Office. Parking citations are a minimum of $30.

Publisher

The Catalog of Courses is published annually through the Office of Public Relations and Marketing, El Camino Community College District, 16007 Crenshaw Blvd., Torrance, CA 90506.

El Camino College has made every reasonable effort to determine that this Catalog is accurate. Courses and programs offered, together with other matters contained herein, are subject to change without notice by the administration for reasons related to student enrollment and level of financial support, or at the discretion of the district and the college. The district and the college further reserve the right to add, amend or repeal any rules, regulations, policies and procedures.

Non-Discrimination Policy

Non-Discrimination Policy

The El Camino Community College District is committed to providing equal opportunity in which no person is subjected to discrimination on the basis of ethnic group identification, national origin, religion, age, sex, race, color, ancestry, sexual orientation, physical or mental disability or retaliation.

Mission Statement

El Camino College offers quality, comprehensive educational programs and services to ensure the educational success of students from our diverse community.

EL CAMINO COLLEGE is committed to being an open access institution and serving students of all ages, cultures and backgrounds.

Our exemplary faculty and professional staff recognize that individual, community and global needs are diverse and changing. In response to these needs the college offers comprehensive educational opportunities for:

- ❑ Achievement of Associate Degrees in Arts and Sciences
- ❑ Transfer to baccalaureate institutions
- ❑ Mastery of basic skills such as critical thinking, mathematics, written and oral communication
- ❑ Cultural enrichment and lifelong learning
- ❑ Acquisition of the necessary career education and skills to successfully participate in the workplace and global economy
- ❑ Development of the economy and jobs in the region and state

To assure the quality of these educational opportunities, the college is dedicated to implementing its stated institutional goals:

- ❑ Maintain optimal academic standards
- ❑ Ensure the availability of academic and student support services
- ❑ Provide the technology, infrastructure and facilities to support teaching and learning
- ❑ Foster a positive campus climate
- ❑ Create educational, business and community partnerships
- ❑ Follow progressive and prudent fiscal policies and practices
- ❑ Support continuous professional development for faculty and staff

Consistent with the mission statement, the College developed statements of philosophy, values and guiding principles as follows:

Statement of Philosophy

Everything El Camino College is or does must be centered on its community. The community saw the need and valued the reason for the creation of El Camino College. It is to our community that we must be responsible and responsive in all matters educational, fiscal and social.

Statement of Values

Our highest value is placed on our students and their educational goals. Interwoven in that value is our recognition that the faculty and staff of El Camino College are the College's stability, its sources of strength and its driving force. With this in mind, our five core values are:

People
We strive to balance the needs of our students, employees and community.

Respect
We work in a spirit of cooperation and collaboration.

Integrity
We act ethically and honestly toward our students, colleagues and community.

Diversity
We recognize and appreciate our similarities and differences.

Excellence
We aspire to deliver quality and excellence in all we do.

Guiding Principles

The following guiding principles are used to direct the efforts of the District:

El Camino College must strive for distinction in everything the College does - in the classroom, in services and in human relations. Respect for our students, our fellow employees, our community and ourselves must be our underlying goal.

Cooperation among our many partners is vital for our success - whether they be other schools and colleges, businesses and industries, or individuals.

Access and opportunity must never be compromised. Our classrooms are open to everyone who meets our admission eligibility and our community programs are open to all. This policy is enforced without discrimination and without regard to gender, ethnicity, personal beliefs, abilities or backgrounds.

El Camino College has taken its mission seriously since its founding more than a half-century ago. Recognizing the ever-changing population of the South Bay along with the diversity of educational needs and advances in technology, the college continually re-focuses its courses and programs to stay in the vanguard of America's higher education.

During the 1996-97 academic year, El Camino College celebrated our Golden Anniversary, 50 years of providing excellent education to all of the South Bay. Today we are prepared to meet the challenges of the 21st century.

History

In 1946, after strong recommendations by a consulting team to establish a two-year college in the Inglewood-South Bay area, the governing boards of the Centinela Valley, Redondo, Inglewood and El Segundo districts won 10-1 voter approval for the creation of a junior college.

Torrance soon joined the newly chartered group, and the El Camino Community College District was officially established on July 1, 1947.

Located centrally in the South Bay, the El Camino Community College District encompasses five unified and high school districts, twelve elementary school districts and nine cities - a population of nearly one million.

Early classrooms were surplus World War II barracks which were trucked north from the old Santa Ana Army Air Base in Orange County.

The first permanent building for classroom instruction was the shop building which opened in 1949. The women's gym, field house, another shop building and the social science building followed. Major construction was the order of business nearly every year during the growth years of the college.

El Camino College's buildings cover 1,129,112 square feet and were built at a cost of $28 million. That means 27 structures were completed without any bonded indebtedness to the District.

In November 2002, voters of the El Camino Community College District passed Measure E, a $394 million bond measure. The successful passage of this bond measure will allow the District to build several new buildings, engage in major remodeling and reconstruction of others, and take steps to improve the health and safety of students and employees. The money can be used only on facilities and equipment. None of it can be used for salaries or programs. A Citizen's Bond Oversight Committee provides an annual report to the public regarding the use of the funds.

El Camino College Administration, Faculty and Trustees

The faculty has grown since the first 30 members to more than 850 full-time and part-time instructors today. Nearly 25 percent of the full-time faculty have earned doctoral degrees while more than 90 percent have master's degrees. The remainder have excellent credentials for their areas of expertise.

The college is governed by the five members of the El Camino Community College District Board of Trustees. Each is elected for a four-year term by voters in five trustee areas which comprise the college district. Board meetings are held monthly and are open to the public.

Leading the administration is the college's president who also serves as superintendent of the El Camino Community College District. The president is assisted directly by four vice presidents. Their areas of responsibility are academic affairs, administrative services, student and community services, and human resources.

As the college mushroomed from an enrollment of fewer than 500 in 1946 to nearly 30,000 students today, the curriculum expanded to include not only lower division courses but an honors program and numerous vocational programs. Today, El Camino College students enjoy a broad curriculum featuring nearly 2,500 different classes offered in some 850 different programs. With more courses available during a variety of class times, students have wide flexibility in individual scheduling.

The college confers the associate degree each spring on about 1,200 students who have completed their 60 semester units and have satisfied their major field of study obligations. Many students each year also qualify for certificates of completion, signifying course requirements have been met in major skill areas.

The college is a reflection of its five presidents. The founding president, Forrest G. Murdock served until his retirement in 1958. He was succeeded by Dr. Stuart E. Marsee whose tenure saw 24 years of financial stability, building and growth. Retiring in 1982, he turned the campus over to Dr. Rafael Cortada. Dr. Cortada's legacy to the college was the establishment of the Honors Transfer Program and development of the El Camino College Foundation which raises funds for programs not supported through the general budget. Dr. Sam Schauerman, who had served the college first as a dean of instruction, then as vice president of instruction, became El Camino College's fourth president from 1987 to 1995. El Camino College today is under the leadership of Dr. Thomas M. Fallo whose direction is guiding the college through the 21st century.

Academic Year

The academic year is divided into two 16-week semesters, one winter session, and a summer session. The academic year starts with the fall semester, which generally begins the last week of August and concludes before the winter break in December. The spring semester usually begins in February and usually concludes at the beginning of June. Spring break is between the eighth and ninth weeks of the spring semester.

El Camino College Foundation

Since 1983, the charge of the El Camino College Foundation has been to solicit, receive, and administer private gifts, bequests, and donations to benefit students and enhance the quality of their education. With the number of students growing, the Foundation has stepped up efforts to raise funds to bridge the gap between rising demand and deepening budget constraints. In the last six years, the Foundation's assets have grown to more than $7.2 million.

Aspiring to meet the needs of El Camino College's diverse student population, the Foundation actively supports several programs that provide direct and immediate benefit to our students. Founded in 2007, the Foundation Scholarship Program provided scholarships to more than 300 students for a total of $220,000. In addition, the Foundation Book Fund Honor Loan program provides textbook vouchers for students with a financial need and helps empower our students by providing them with an opportunity to "give back" to the program once they have graduated and started their careers.

Through partnerships with individuals and corporations, the Foundation continually responds to the highest priority needs of students and the campus. Through programs such as the Foundation Book Fund, the Scholarship Program, and Grants for Faculty and Staff, resources are provided to help sustain and to grow vital programs and services for students.

For more information about how you can support El Camino College or get involved with the Foundation, please visit our We site at elcaminocollegefoundation.org. You may also contact Katie Gleason in the Foundation Office at 310-660-6040 or kgleason@elcamino.edu.

Family Educational Rights and Privacy Act of 1974

All education records of students who enroll at El Camino College are kept in accordance with the provisions of the Family Educational Rights and Privacy Act of 1974. A student may request access to his or her education record which personally identifies the student and may challenge the accuracy of the record or the appropriateness of its retention. Student consent is needed for the release of records covered by the act to outside parties (for example: prospective employers) except for those agencies entitled to access under the provisions of the act (for example: campus officials, other schools, federal educational and auditing officials, and requests in connection with the application or receipt of financial aid). These provisions apply to records received and used after Nov. 19, 1974.

Students may request a copy of a record which the student has requested or consented to be released. The full text of the Family Educational Rights and Privacy Act of 1974 is in the United States Code Annotated, Title 20, 1232g, pocket part, in the campus library reference room. Particular questions with respect to a student's prerogative under the Family Educational Right and Privacy Act of 1974 should be directed to the office of the Dean, Enrollment Services.

Children in Classrooms

Children are not permitted in classrooms while class is in session. Attendance in class is limited to officially enrolled students and authorized visitors and guests only. Students shall not allow children to be left unattended or unsupervised anywhere on campus. It is the responsibility of each faculty member to inform students of this requirement.

Student Information

In accordance with Education Code Section 54626: information may be made available to newspaper, magazine, radio, or television media and prospective employers for the purpose of reporting a student's participation in officially recognized college activities and sports events or the student's receipt of college degrees and awards.

Information may include the student's name, address, telephone listing, date and place of birth, major field of study, class schedule, dates of attendance, weight and height of members of athletic teams, and the most recent previous educational institution attended by the student. The names and addresses of students may be provided to public or private schools or colleges for purposes directly related to the academic or professional goals of the institution.

A student who does not wish any or all of the information to be made available without prior consent must file a petition in the Admissions Office at the time of enrollment or before the beginning of classes, requesting that this information be withheld.

How to Reach Us:

Toll-free 1-866-ELCAMINO – www.elcamino.edu
Area code is 310

Academic Division Office Telephone Numbers

Behavioral & Social Sciences	660-3735
Business	660-3770
Fine Arts	660-3715
Health Sciences & Athletics	660-3545
Humanities	660-3316
Industry & Technology	660-3600
Learning Resources	660-3525
Mathematical Sciences	660-3200
Natural Sciences	660-3343
Nursing	660-3281
Special Resource Center	660-3295

Student Services Telephone Numbers

Admissions Office	660-3414
Adult Re-entry Center	660-3558
Assessment and Testing	660-3405
Bookstore	660-3380
Campus Police	660-3100
Cashiers Office	660-3142
Child Development Center	660-3720
Counseling Appointments	660-3458
ECLA	660-6707
EOP&S	660-3464
Financial Aid	660-3493
First Year Experience/Learning Communities	660-6936
Health Center (closed Summer)	660-3643
Inter Club Council	660-6399
International Students	660-3431
Library Circulation	660-3519
Library Reference	660-6483
Parking Services	660-6769
Records Office	660-3436
Registration Help Line (seasonal)	660-6034
Scholarship Office	660-6541
Student Development	660-3500
Student Government	660-3507
Telecommunication for the Deaf (TTY)	660-3445
Transfer Center	660-3408
Tutoring Center	660-3511
Workplace Learning	660-3351
Veterans Office	660-3486

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Admission

Anyone 18 years of age or older qualifies for admission to El Camino College. If under the age of 18, you will qualify if you have 1) graduated from high school or 2) passed the California High School Certificate of Proficiency Test.

Special Part-Time or Full-Time Students

El Camino College may admit as a special part-time or special full-time student anyone in grades 11 or 12 who, in the opinion of the college president, may benefit from instruction. These students will be subject to any change in regulations for concurrently enrolled students and all subsequent policies and procedures as adopted by El Camino College.

Residents of other states and foreign students are subject to out-of-state tuition. AB 540 allows undocumented students who meet specific criteria to pay in-state tuition at California public colleges and universities. AB 540 does not provide access to state or federal financial aid. Students who attend private and parochial schools follow the same residence requirement. Concurrently enrolled 11th and 12th grade students shall receive credit for community college courses which they complete. If credit is used for high school graduation, attention is called to Section 1630, Title 5, California Administrative Code.

Enrollment approval forms, which are available in the Admissions Office, must be presented when the student files an application for admission to college. A separate approval must be provided for each semester, summer session, or winter session in which the student is enrolled. Concurrently enrolled 11th and 12th grade students must comply with all policies, follow all procedures, and meet all requirements by the published deadlines for each semester and/or session.

California Residence Requirement

To attend El Camino College as a resident of California, a student is required to have been a legal resident of the state, as defined in the California Education Code, for more than one year immediately preceding the residence determination date. The residence determination date is the day preceding the first day of the semester or session.

Physical presence in California for a year and a day prior to the start of semester term or session does not itself constitute California residency. Physical presence must be coupled with intent and there must be no factors that contradict intent. Ultimately, the burden of proof in determining residency lies with the student.

District Residence Requirements

A student 18 years or older who resides in the El Camino College District is classified as a district resident as defined by the California Education Code and may enroll in any courses for which he/she is qualified. The residence of the student under age 18 is determined by the legal residence of the parents as defined by law.

Exceptions to Residence Determination

A list of exceptions to residence determination will be issued by the Admissions Office to each student who is classified as a "non-resident."

Consideration will be given to appropriate evidence submitted by the student in the active United States military service or who is a dependent of a member of the United States military service. The student should contact the Admissions Office for possible classification as a resident.

Appeal Procedure

Any student, after a final decision on residence clarification, may make written appeal as provided in Title 5, California Administrative Code, within 30 calendar days of notification.

Enrollment Fee

El Camino College has a strong commitment to ensuring accessibility to all of its programs and services for all residents of the District who are capable of benefiting from such programs and services. A limited number of related services which the student uses shall be supported by fees charged to students to assist defraying the costs of providing these services.

The mandatory general student fee will be collected at the time of registration. Students who fail to pay this required fee at the time of registration may subsequently be dropped from classes. Grades, transcripts and diplomas will be withheld and future registration restricted. The enrollment fee is $20 for each unit of credit (subject to change).

El Camino College is part of the system of public higher education of the State of California. The information in this section may be subject to change as a result of new state legislation or requirements of the California Community Colleges System Office after the publication date of this catalog.

The enrollment fee requirement shall not apply to students enrolled in the non-credit courses specified in Education Code Section 84711.

A student who is on the Temporary Assistance for Needy Families (TANF) Program, the Supplemental Security Income/State Supplementary Program (SSI/SSP), or the General Assistance Program in the Financial Aid Office must apply for the Enrollment Fee Financial Assistance programs prior to the close of the term in the Financial Aid Office. If any additional documentation is required, this must be submitted to the Financial Aid Office and completed prior to the close of the school term. (Board Policy 5030.2.)

All students interested in applying for financial aid or receiving financial aid need to refer to the financial aid and scholarship section of this catalog.

Refund of Enrollment Fee

To receive a refund, students must drop their classes through the online system located in the Activities Center (first two weeks of a semester) or the Cashier's Office or by Web or telephone according to dates published in the schedule of classes and on fee receipts.

To receive a refund for a parking permit, students must return the permit to the Cashier's Office within the time period specified in the class schedule. Refund checks will be mailed before the end of the semester.

If a mailing address has changed, please update the change in the Admissions Office.

Those who drop a class that meets fewer than 15 weeks must drop by the end of the first full week of classes.

A refund fee not to exceed $10 may be charged for enrollment refunds.

Fee Payment Methods

Personal checks drawn on United States banks only, money orders or cash will be accepted for any fee paid. VISA, Discover and MasterCard credit cards will be honored. Checks returned by a student's bank for any reason will result in (1) suspension from enrollment, (2) denial of subsequent registration, and (3) detention of transcript until financial obligation has been satisfied. A service charge of $20 will be assessed on any returned check.

Health Services Fee

In accordance with the California Education Code, Section 72246, students pay $14.00 each semester to cover the operation, supervision, programs and services of the Student Health Center. There are exceptions under these conditions:

- Students receiving financial aid pursuant to Section 72252.1.
- Low-income students who meet the Board of Governors Grant criteria (pursuant to Section 72252) as demonstrated by appropriate support documentation of eligibility; SSI eligibility; or GA eligibility; Veterans Affairs Dependent Fee Waiver Certification; Agency Certification; or Income Tax Form as they relate to qualifying Income Levels; or a combination of these and unmet student need as determined by the Financial Aid Office.
- Students who depend exclusively upon prayer for healing in accordance with the teachings of a bona fide religious sect, denomination or organization.

Exemptions: Students enrolled only in classes held off campus, distance education classes only, non-credit classes only or worksite classes, high school students, or students enrolled in contract classes will not be required to pay the Health Services Fee.

Refund: Students who withdraw from all courses prior to the close of the second week of the term will be eligible for a refund of the Health Services Fee.

Non-Resident Fee

In addition to the general student fees, an out-of-state United States citizen is charged an out-of-state fee of $180 for every credit unit. A citizen of another country pays a non-resident fee of $221 for every credit unit. A resident is defined as a citizen of the United States or a person who holds a status which allows him/her to establish residency in the United States, and can provide evidence of physical presence in the state of California for at least one year prior to the residency determination date, and evidence of intention to make California his/her permanent home. Dates on any documentary evidence should correspond to dates of physical presence in California. A non-resident is a person who does not meet the residency requirements of the state of California or who is a citizen of a foreign country and holds only temporary status in the United States. El Camino College maintains a list of exceptions to the non-resident fee requirement. Such a list will be issued by the Admissions Office to each student who is classified as a non-resident.

Consideration is given to appropriate evidence submitted by the student to substantiate a change in this classification. Possible changes could go to students in the active United States military services or to those who are dependents of an active member of the United States military.

El Camino College requires a $25 (subject to change) application processing fee for out-of-country applicants.

All fees must be paid by checks drawn on a United States bank or by cash. Checks drawn on out-of-country banks will not be honored.

Non-Resident Tuition Fee Refund

Students will receive a full or partial refund for non-resident tuition if they drop their classes through the online system in the Activities Center, by telephone, by the Web, or in the Cashier's Office according to the following schedule.

- During the first calendar week of the semester, 100 percent of the fee will be refunded.
- During the second calendar week of the semester, 75 percent of the fee will be refunded.
- During the third calendar week of the semester, 50 percent of the fee will be refunded.
- During the fourth calendar week of the semester, 25 percent of the fee will be refunded.

Refunds for the Summer and Winter sessions and for short-term courses of 8 weeks or less will be granted if classes are dropped according to the following schedule.

- During the first calendar week of the term, 100 percent of the fee will be refunded.
- During the second calendar week of the term, 50 percent of the fee will be refunded.

Photo Identification Card

All students are encouraged to obtain a free El Camino College identification card. These student Photo ID cards are available in the Activities Center which is open five days a week, Monday through Friday from 8:00 a.m. to 5:00 p.m. These cards serve as photo identification and are required for Library and lab services, campus activities, and for verification of attendance in certain classes. Student ID cards are also needed to use any campus computer.

For only $10, you may also purchase an ASB (Auxiliary Services Benefits) sticker at the Cashier's Window located in the Administration Building. These stickers are also available at the Activities Center and Marsee Auditorium Ticket Office. This ASB purchase provides students, as well as faculty and alumni, a number of discounts throughout the district, such as automotive and clothing accessories, fast food, and movie tickets. Discount tickets for Disneyland, Knott's Berry Farm and other amusement parks are also available. On campus, the ASB sticker provides a 10% discount on clothing at the bookstore and free admission to all campus athletic events and ASO dances as well as the opportunity for free drawing giveaways such as "show your ASB and get an item free."

ASB funds support the student newspaper, athletic programs, Fine Arts Division events, and completely fund the Associated Student Organization (ASO).

Parking Fee

Students wishing to park on campus will pay a parking fee each semester in accordance with Education Code Section 72247. This fee is $35 per semester for automobiles. The parking fee for motorcycles is $20 per semester. The parking fee for the Summer or Winter session is $20 for automobiles or motorcycles.

Visitors must also pay a parking fee by purchasing a daily parking permit.

Students/Visitors with disabilities who have been issued a DMV Disabled Person (DP) placard may park in any designated disabled person parking space, faculty/staff space, or visitor's space and MUST DISPLAY the DMV DP placard/plates AND a valid El Camino College semester or daily parking permit when parked on campus. Failure to display both the disabled placard/plates and the El Camino College semester or daily permit will result in the issuance of a citation. Temporary arrangements can be made at Campus Police Parking Services.

Red and white marked stalls are made available to El Camino Community College District directors, deans, and other management personnel for a fee through the Business Manager's Office. Although located in general staff lots, they are for the exclusive use of the individuals paying the fees. All others occupying these stalls are subject to citation.

Transcript of El Camino College Record

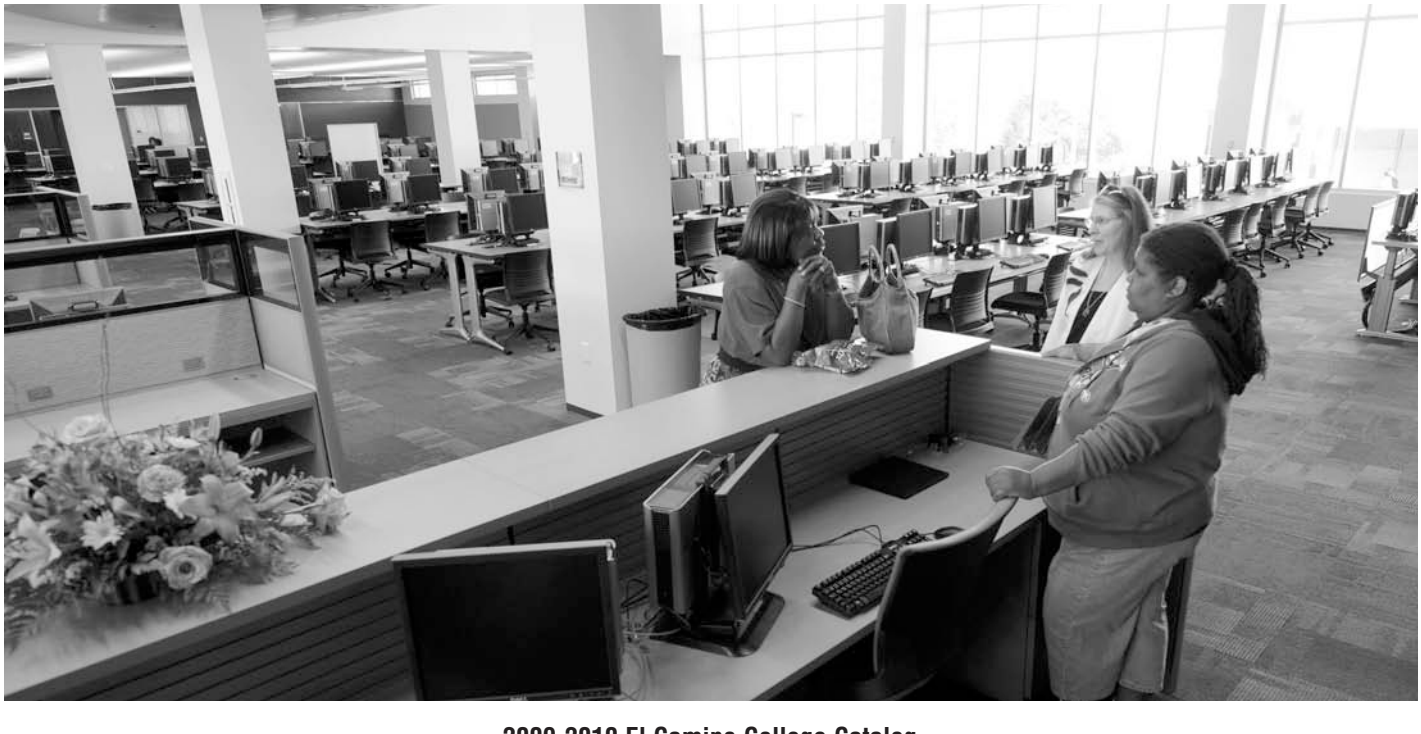
A transcript of the student's academic record at El Camino College will be furnished upon request by the student only, through the Records Office. An official copy will be mailed for transfer or employment purposes at the student's direction, or the individual may request that an unofficial copy be mailed home for personal use. A delay in mailing the transcript may result if a student has outstanding fees or fines against his/her record (library, laboratory, physical education locker, supplies or returned checks). Academic work completed at other colleges will not be included on or with the El Camino College transcript.

E-Mail Accounts and the Portal

Students are required to use their El Camino College assigned e-mail account. This e-mail account is a tool for you to communicate with faculty and ECC divisions and for ECC to communicate with you. Your e-mail address is your LoginID followed by @mail.eccd.edu. For example:

firstname_lastnamelast4socialsecuritynumbers@elcamino.edu

Students are also encouraged to use *MyECC* El Camino College's gateway to information about academic and financial aid records as well as general information about the college. You can access *MyECC* from the convenience of your home, from a computer lab, or by using one of the college's kiosks. *MyECC* can be accessed at: www.elcamino.edu; click on *MyECC*.



Fees at a Glance (All fees are subject to change.)

Enrollment Fee . . . . . .$20 per unit (subject to change)
Parking Fee - Car . . . . . .$35 for each semester
Parking Fee - Motorcycle . . . . . .$20 for each semester
Parking BOGW - Method A or B . . . . . .$20 for each semester
Parking BOGW - Method C (FAFSA only) . . . .$20 for each semester
Health Fee . . . . . .$17 for each semester (subject to change)
Out-of-state Fee . . . . . .$190 per unit plus the enrollment fee
Out-of-country Fee . . . . . .$221 per unit plus the enrollment fee
F-1 Visa Student Health Insurance . . . . . .$360 per semester (subject to change)
Auditing . . . . . .$15 per unit
Credit by Examination . . . . . .$20 per unit
Transcripts . . . . . .First two free; $2 for each thereafter; $5 for emergency
College Catalog . . . . . .$5 in Bookstore, $7 by U.S. Mail
ASB Activity/Discount Sticker . . . . . .$10 per semester
Student Representation Fee . . . . . .50¢ per semester (required)

Registration Information

Registration Procedure

Each student is required to have an appointment to register before being permitted to register. It is issued prior to the start of the registration cycle for continuing students and on a first-come, first-serve basis for new and returning students and indicates the day and hour of registration. It is available to qualified students who complete the admission requirements.

Students must enroll on the date and time indicated or any time thereafter in accordance with the published registration schedule.

Schedule of Classes

Before the registration period for each semester or summer or winter sessions, the college publishes a Schedule of Classes listing the courses offered, general registration procedures and placement and college ability tests. Schedules are available on the Web and may also be obtained at the Help Desk in the Student Services Center.

Priority Registration

In compliance with Section 58108 of Title 5, California Administrative Code, priority registration will be implemented as follows:

I. Special registration assistance to the handicapped or disadvantaged students as defined by statute for the purpose of providing equalization of education.
II. Students will receive priority registration according to this ranking system and criteria:
  A. General registration priority will be awarded as follows:
    1. First priority: continuing students
    2. Second priority: new and re-admit students
  B. For fall and spring semesters, the enrollment of continuing students in accordance with priority system established on the basis of these factors:
    1. One point for each unit completed at El Camino College plus one point for each unit in which he/she is currently enrolled (mid-term), with a maximum of 60 points.
    2. Points awarded according to the total units in current program after the 12th week, as follows: 0 to 3 units equals 0 points; 3.5 to 6 units equals 2 points; 6.5 to 9 units equals 4 points; 9.5 points to 15 units equals 6 points; and 15.5 plus units equals 10 points.
    3. A reward of 15 points to students for maintaining their original unit load from the start of the semester through the 12th week.
    4. A reward of 10 points to students with 2.0 or higher cumulative GPA.
    5. Day and evening programs are used to divide the student body into a day or extended day priority system. One or more day classes constitutes a day program.
III. The early enrollment of students who meet one of these guidelines:
  A. Instruction program requires time off campus limiting the choice of class periods on campus.
  B. The instructional activity requires a block of time associated with scheduled classes for such activities as practice, meetings, counseling and off-campus travel.
  C. First semester F-1 visa student.

Continuous Enrollment for Priority Registration

Continuous enrollment at El Camino College constitutes enrollment in the most recent previous semester per academic year, excluding summer and winter sessions. A student must remain enrolled in at least one course for sufficient time to receive a grade of "W."

Unit Limitations

The student's program of studies will vary according to individual need and objectives. There is no minimum but the maximum program for a semester is 18 units without a physical education class and 19 units with a physical education class. The maximum program of study for the six-week summer session is 8 units or 9 units for the eight-week session if at least one unit is physical education. The maximum program of study for the winter session is 7 units. The minimum full-time student program is 12 units per semester. A student wishing to take more than the maximum units may file a petition through the Counseling Services Division. Students must have completed at least 15 transferable units in one semester at El Camino College with a 2.75 grade point average and an overall grade point average of 2.5 or higher to be eligible for an overload.

In addition to scheduled class hours, students should include in their weekly schedule the time necessary to study and prepare for classes. Each student is expected to spend two hours per week in study and preparation for each class hour per week in lecture courses. Students who work in business or industry should reduce their total study programs in proportion to the demands of their employment and personal activities. If employment requires 40 hours or more per week, students would limit their study program to 7 units or less each semester.

Full Time Student

A student is defined as full-time if carrying 12 units or more during the regular semester or 4 units during the summer session.

Veteran and War Orphan benefits under the G.I. Bill are based on 12 units for full subsistence; 9 units for three-fourth subsistence; 6 units for half subsistence.

For automobile insurance and other insurance benefits, a student must be enrolled in 12 units.

Athletic eligibility is based on 12 units and student government eligibility is 8 units.

F and M Visa students must maintain full-time status of 12 units or more. Any exception to this requirement must be approved in advance by a "Designated School Official." An F or M Visa student who drops below 12 units without receiving approval from a "Designated School Official" will be out-of-state and subject to deportation.

Filled and Cancelled Classes

Because many classes fill quickly in the registration process, students should enroll for classes as soon as the appointment time allows. If you wish to take a pre-collegiate basic skills course that is a required prerequisite and all sections of that basic skills course are filled, then you may petition to have the prerequisite course waived for that particular term. Guidelines and forms for requesting a waiver of a prerequisite are available in the counseling office in the Student Services Center.

All classes scheduled at El Camino College are subject to cancellation. Although the college makes every effort to run each class which is scheduled, occasionally a class must be canceled due to insufficient enrollment or to the unavailability of an instructor.

Attendance by Non-registered Students

Only those students registered in a class may attend the class. Students who have completed the proper auditing procedure are allowed to attend without receiving grades or unit credit. No others may attend, including children of students.

Field Trips and Excursions

Board Policy 4300

The Superintendent/President shall establish procedures that regulate the use of District funds for student travel and attendance at conferences and other activities that are performed as a class assignment or co-curricular activity.

The Superintendent/President, under authorization from the Board of Trustees, may authorize field trips and excursions for students in connection with courses of instruction or college-related social, educational, cultural, athletic or musical activities to and from places in California, or any other state, the District of Columbia, or a foreign country. The Superintendent/President may delegate the authority to the appropriate Vice President.

The District may pay for expenses of students participating in a field trip or excursion with auxiliary, grant or categorical program funds if the funds are used consistently with the funding source. The expenses of instructors, chaperones, and other personnel traveling with students may also be paid from District funds. No student shall be prevented from making a field trip or excursion which is integral to the completion of the course because of lack of sufficient funds.

Students and staff shall at all times adhere to the standards of conduct applicable to conduct on campus.

Additional Information

Throughout the school year, the District may sponsor voluntary field trips and excursions in which students may want to participate. Be advised, as stated in the California Code of Regulations, Subchapter 3, Section 55220, if a student participates in a voluntary field trip or excursion, the student has deemed to have held harmless the District, its officers, agents and employees from all liability or claims which may arise out of or in connection with the student's participation in this activity.

Matriculation

Matriculation is an on-going process which will help you attain success and achieve your educational goals. The matriculation process is designed to help you match your interests, abilities, needs, and goals with the college's courses, programs, and services.

Matriculation services are intended to help you make informed decisions as you develop your educational plan. El Camino College supports your educational development and recognizes your worth as an individual through matriculation and related services.

You are expected to participate in the matriculation process. Participation provides you with information about and referrals to programs and services that will contribute to your success.

Four Steps to Matriculation

Step 1. File your college application and declare one of these goals:

- Transfer to a university without an associate degree
- Associate degree and transfer to a university
- Associate degree in a vocational program
- Associate degree in a general education program
- Certificate in a vocational program

Step 2. Participate in assessment for educational planning.

Assessment is based on multiple measures, including placement tests. Take appropriate placement tests and consult with an academic counselor. Or, if you are a new student who has not attended college before, schedule an appointment for a My New Student Orientation workshop for your educational needs, career interests, aptitudes, and other pertinent information to complete your initial assessment. Placement testing is available in the Assessment/Testing Center, SSVC 217. English or ESL or Mathematics assessment should be completed before you attempt to register in classes. Please read the "Assessment Procedures" for more information about specific placement or specialized tests.

You must have transcripts or grade slips from all colleges attended before you make a counseling appointment. English, Mathematics, ESL, or other courses completed with a grade of C or better at an accredited college may be used to meet prerequisites or

corequisites if the completed courses are equivalent to El Camino College courses. High school transcripts may be used for assessment. Official transcripts must be mailed from your high school, college, or university to the Records Office.

Step 3: Participate in the *My New Student Orientation* workshop and counseling for El Camino College.

New students must attend an educational planning orientation session or complete the online orientation (www.elcamino.edu-MyECC) in order to complete the matriculation process. The *My New Student Orientation* is intended for students who have not attended college before. The orientation will teach you about your educational options and important guidelines for achieving your academic goals.

Step 4: Follow-up and educational planning with a counselor.

You must follow-up and meet with your counselor at least once a year as part of your matriculation process. During this meeting, you will complete a written educational plan which is a list of recommended courses to take to reach your educational goal. Any concerns regarding the matriculation process may be addressed with the Dean of Counseling and Student Services. A formal grievance must follow the policy and procedures outlined in this catalog.

For the non-matriculant student:

All services and classes are open to general admission students. If you do not wish to matriculate, you will nonetheless be provided full access to services and classes at El Camino College. As a general admission student, you will not be required to complete the matriculation process.

Orientation

All students are encouraged to participate in orientation so as to become familiar with the college and its resources. Orientation is offered in different locations: online (www.elcamino.edu-MyECC) and matriculation counseling groups for new students. Special orientation sessions are arranged for high school students through their high schools. Orientations are also arranged for students who participate in the following support programs, such as Honors, EOP&S, Financial Aid, students with a disability, athletes, and international students. Our El Camino College New Student Welcome Day, scheduled every year on the third Wednesday in August, is a great way for students to get to know the campus, learn about academic programs, services and meet new friends.

Assessment/Testing

Assessment Procedures

Placement in English, English as a Second Language (ESL), Mathematics, and Chemistry courses is based upon assessment which includes placement test scores and other multiple measures such as previous courses completed and grades received in those courses, use of skills at work, and work-related training. Refer to course descriptions in the El Camino College Catalog to find out which placement tests are required or recommended for the courses you wish to take. After you receive your testing results, you should arrange to see a counselor for help in planning your program.

In order to begin this process, you must first have an El Camino College application on file. This can be done online or in person in the Admissions Office. Next, complete your placement tests at the Assessment/Testing Center located in Room 217 of the Student Services Center. A photo I.D. and your El Camino College I.D. number (the number received at the time of application) are required to test or obtain copies of past test results.

Most of the placement tests are computerized and must be completed before you register for courses. Re-testing is limited and may not be done after you have enrolled in any course related to the test.

English Placement Test

The computerized English Placement Test should be completed before you register and may not be repeated once you have enrolled into both English course sequences at El Camino College. You should complete this test for any course which has an English course as a prerequisite, corequisite, or recommended preparation. If you have satisfactory grades in English courses from an accredited college or university, you should present a grade slip or transcript of those courses to your counselor for placement evaluation. SAT verbal scores may not take the place of the English Placement Test, but may be used as part of your overall assessment.

In order to begin the process, you will first need to file your El Camino College application in Admissions or online. For testing, you will need a photo I.D. and your El Camino College I.D. number.

After you receive your test results, a further review of your placement recommendation may be requested. Information and appropriate petition forms are available from the Assessment/Testing Center.

English as a Second Language (ESL) Test

A student who has no knowledge of English may participate in the assessment process and may enroll in courses as recommended. However, prospective students should be aware that the lowest level ESL courses at El Camino College do not start at the very beginning, and all ESL courses are taught in English.

The computerized ESL Placement Test should be completed before you register and may not be repeated once you have enrolled in ESL courses at the College. You must complete this test for any course which has an ESL course as a prerequisite. Because of the variability in curriculum, ESL classes taken at another institution cannot be used alone to determine placement.

In order to begin the process, you will first need to file your El Camino College application in Admissions or online. For testing, you will need a photo I.D. and your El Camino College I.D. number.

The ESL test is in two parts and requires two visits to campus. The first part is on a drop-in basis and should be completed at least one week before you register. The second part is by appointment only and must be completed before you register.

After you receive your test results, a further review of your placement recommendation may be requested. Information is available from the Assessment/Testing Center.

Mathematics Placement Test

The computerized Mathematics Placement Test should be completed before you register in any mathematics course and may not be repeated once you have enrolled in the mathematics sequence at El Camino College. If you have satisfactory grades in mathematics courses from an accredited college or university, you should present a grade slip or transcript of those courses to your counselor for placement evaluation. High school courses completed or SAT mathematics scores may not take the place of the Mathematics Placement Test, but may be used as part of your overall assessment. Assessment/placement results are valid for two years.

In order to begin the process, you will first need to file your El Camino College application in Admissions or online. For testing, you will need a photo I.D. and your El Camino College I.D. number.

After you receive your test results, a further review of your placement recommendation may be requested. Information and appropriate petition forms are available from the Assessment/Testing Center.

Chemistry Placement Test

The Chemistry Placement Test should be completed before you register and may be taken only once. The test places a student either in Chemistry 1A or Chemistry 4. Note: The test may not be taken if a student has ever enrolled in Chemistry 4. Previous high school or college chemistry courses do not in themselves qualify a student for Chemistry 1A. Students who have never taken a Chemistry course or who want a beginning level course, should not test, but may enroll in Chemistry 4, 20, or 21A, depending upon their majors and completion of mathematics prerequisites.

In order to begin the testing process, you will first need to file your El Camino College application in Admissions or online. For testing, you will need a photo I.D. and your El Camino College I.D. number.

After you receive your results, a further review of your placement recommendation may be requested. Information and appropriate petition forms are available from the Assessment/Testing Center.

Mathematics Competency Test

This test covers basic algebra. If passed, the test may be used to satisfy the El Camino College mathematics competency graduation requirement (item #6 of Section A of the A.A./A.S. graduation requirements).

In order to test, you will first need to file your El Camino College application in Admissions or online. For testing, you will need a photo I.D. and your El Camino College I.D. number.

Information and appropriate petition forms for limited re-testing are available in the Assessment/Testing Center.

DRP (Degrees of Reading Power) Test

The DRP Test is a reading test administered by the Assessment/Testing Center for the El Camino College Nursing Department. It is given on an appointment-basis only. A reservation ticket must be obtained in person from the Assessment/Testing Center.

ATB (Ability-To-Benefit) Test

In order to receive financial aid, students must be "academically qualified" for study at the post-secondary level. Students who possess a high school diploma or a GED certificate are considered to have met this qualification. However, students who did not graduate from high school or who do not have a GED must pass an Ability-To-Benefit Test prior to receiving financial aid.

The ATB Test is given only upon the written referral of the Financial Aid Office. Their referral slip must be presented to the Assessment/Testing Center on the day of testing.

Waiver Exam for the Associate Degree

A waiver exam is available for Contemporary Health. Contact the Assessment/Testing Office for further information.

Advanced Placement Tests

High school students who enroll in El Camino College may petition for college credit based on high school Advanced Placement courses. Credit will be given for the following courses if the student has taken the appropriate Advanced Placement Test and received a score of 3, 4 or 5. (No credit will be given for a score of 1 or 2.) The maximum number of units granted will be 15.

Students who plan to transfer are advised that the specific transfer institution will determine unit and course credit for AP exams. Please refer to the College Catalog or the Web site of the appropriate transfer institution for specific information.

Art (History of Art) Examination:
Art 2 (History of Western Art) (3 units);
Art 3 (History of Western Art) (3 units)

Biology Examination:
Biology 10 (Fundamentals of Biology) (4 units)

Chemistry Examination:
Chemistry 1A (General Chemistry I) (5 units)
(Note: The student must have a score of 4 or 5 and provide a laboratory portfolio to the Dean of Natural Sciences for evaluation for credit.)

Computer Science Examination:
Computer Science 1 (Problem Solving and Program Design Using C++) (4 units) - Score 4 or 5 on Computer Science A Examination, or 3 or 4 on AB Examination
Computer Science 1 and 2 (Introduction to Data Structures) (9 units) - Score of 5 on Computer Science AB Examination

Economics (Macroeconomics) Examination:
Economics 1 (Principles of Economics: Macroeconomics) (3 units)

Economics (Microeconomics) Examination:
Economics 2 (Principles of Economics: Microeconomics Theory) (3 units)

English (Language and Composition) Examination:
English 1A (Reading and Composition) (4 units) - Score of 3 or 4
English 1A (Reading and Composition) and English 1B (Literature and Composition) (7 units) - Score of 5

English (Literature and Composition) Examination:
English 1A (Reading and Composition) (4 units) or
English 1B (Literature and Composition) (3 units) - Score of 3 or 4
English 1A (Reading and Composition) and English 1B (Literature and Composition) (7 units) - Score of 5

Foreign Language Examination:
Two consecutive courses for a total of 8 units

Government and Politics (American) Examination:
Political Science 1 (Governments of U.S. and California) (3 units)

Government and Politics (Comparative) Examination:
Political Science 2 (Comparative Politics) (3 units)

History Examination:
History 1A-1B (American) (6 units)
History 140 (European) (3 units)

Mathematics Examination:
Mathematics 150 (Elementary Statistics with Probability) (4 units) - Score of 4 or 5 on Statistics Examination
Mathematics 190 (Single Variable Calculus and Analytical Geometry I) (5 units) - Score of 4 or 5 on Calculus AB Examination
Mathematics 190 (Single Variable Calculus and Analytical Geometry I) (5 units) - Score of 3 on Calculus BC Examination
Mathematics 190 & 191 (Single Variable Calculus and Analytical Geometry I & II) (9 units) - Score of 4 or 5 on Calculus BC Examination
(Note: Students who score a 3 or better on the Statistics AP exam, the Calculus AB exam, or the Calculus BC exam have met the associate degree, IGETC (Area 2) and CSU General Education (Area B4) mathematics requirements.)

Physics Examination:
Physics 2A (General Physics) (4 units) - Score of 5 on Physics B Examination
Physics 1A (Mechanics of Solids) (4 units) - Score of 5 on Physics C Examination

Psychology Examination:
Psychology 5 (General Psychology) (3 units)

For further information about and petitions for advanced placement tests, contact an evaluations clerk in the Admissions Office.

Attendance

Attendance at First Class

Students who enroll in class but do not attend the first scheduled class meeting may be dropped from the roster and their places given to waiting students who were unable to enroll at the time of registration. If illness or emergency prevents a student from attending the first class session, the student must contact the instructor.

A student who registers for a class and never attends is still responsible for dropping the class. Failure to properly drop a class may result in a "W" and may subject the student for any and all fees associated with the class.

Attendance Without Official Enrollment

Students will not be permitted to attend classes in which they are not enrolled. Exceptions may be allowed by the instructor for bonafide visitors. Students who attend a class without proper enrollment (the student did not properly register or add the class) by the published deadline will not be permitted to "late add" the class except for documented extenuating and mitigating circumstances.

Attendance During Semester

Students are expected to attend their classes regularly. Students who miss the first class meeting or who are not in regular attendance during the add period for the class may be dropped by the instructor. Students whose absences from a class exceed 10% of the scheduled class meeting time may be dropped by the instructor. However, students are responsible for dropping a class within the deadlines published in the class schedule. Students who stop attending but do not drop may still be retained on the course roster and receive a failing grade. Students may view their registration status using the college's Web site.

Adding a Class

If space is available, students who have completed registration may add a class by going to the first meeting of the class and securing permission of the instructor. It is the responsibility of the student to fulfill all requirements to add a course, and to add the course by the add deadline in accordance with college procedures. Adds will not be processed beyond the add deadline.

Withdrawal from Class

Official withdrawal from class must be processed through the online system in the Admissions Office. Failure to complete this process may result in the assignment of a letter grade of A through F.

Dropping a Class

It is the responsibility of the student to officially drop a class by the deadline date.

Independent Study Policy and Procedures

Board Policy 4228

It is the policy of El Camino College to provide enhanced educational opportunities for students wishing to explore a subject area more fully by establishing an Independent Study program. Under the guidance of a supervising instructor qualified to teach in the specific subject area, students in Independent Study courses will complete projects that reflect scholarly or creative efforts of an advanced nature that go beyond the scope of a regular course.

Independent study projects must be approved by the supervising instructor and will require the student to meet regularly with the instructor. Academic standards applicable to Independent Study courses will be the same as those applied to other credit courses.

To be eligible for Independent Study, a student must be in good academic standing and

1. Have completed at least 12 degree-applicable units at El Camino College with a GPA of 3.0 or higher, and
2. Have demonstrated competence in the discipline in which the Independent Study course is being attempted by completing at least two courses in this discipline with a grade of B or higher, and
3. Be concurrently enrolled in at least one other course at El Camino College.

Procedures for implementing this policy will be developed by the Superintendent/President in collegial consultation with the Academic Senate.

Independent Study Administrative Procedures 4228

1. The supervising instructor will scrutinize proposed projects for appropriate depth and rigor. Such projects might, for example, include a lengthy research study, an original production, or a comprehensive exam. The supervising instructor will provide appropriate orientation, guidance, and information regarding course content materials and services and will document progress toward project completion. Projects will be evaluated by the supervising instructor, and the basis for evaluation will be kept on file for at least one semester.

2. Independent Study projects will normally be for one unit of credit, with a maximum of three units per semester; one unit of credit will be granted for 60 hours of work devoted toward the project. A student may earn a maximum of six units of Independent Study at El Camino College.

3. To promote an individualized educational experience for each student, an instructor will supervise a limited number of Independent Study students in one semester or session, as determined by the terms of the Agreement between the District and the ECC Federation of Teachers in effect at that time. In accordance with the Agreement, the Dean of the division in which the Independent Study will be offered shall approve or disapprove each course to be offered.

4. Academic standards applicable to Independent Study courses will be the same as those applied to other credit courses. Independent Study courses will be accepted by the college toward completion of an associate degree and shall be eligible for transfer credit by an institution of the University of California or California State University.

Credit by Examination

Board Policy 4235

The El Camino Community College District is committed to allowing students to receive credit for a specific course by demonstrating mastery of the subject matter and/or skills by credit by exam.

Updated lists of courses eligible for credit by examination, as determined by appropriate faculty, shall be kept in the academic and counseling division offices as well as the records office. It shall be established that the knowledge, skills, and/or experiences gained outside the regular college curriculum are compatible with the course objectives for which credit is requested. Proficiency in subject matter or skills shall be assessed through examination, portfolio, or skills demonstration, and must be at the level expected of students who have successfully completed the course at El Camino College.

The eligibility and fee requirements, along with the procedures and restrictions for obtaining credit by examination, shall be on file in the Administrative Procedures Handbook. These are available in the College records office, counseling services, and all academic division offices. They are also published in the College Catalog and Schedule of Classes.

Credit by Examination Administrative Procedures 2008

Eligibility Requirements

1. Students must be registered and have completed 12 semester units at El Camino College with a minimum grade point average of 2.00 and be in good standing at the time the credit is granted. Students enrolling in or enrolled at El Camino College may be allowed to take the examination prior to completing 12 units; however, credit will not be granted until 12 semester units have been completed.

2. Students shall be allowed to petition to receive credit by examination one time per course. Records staff will check a student's permanent electronic record to ensure that the test has not been taken previously.

3. Students may not petition for credit by examination for a course in which they have previously enrolled and received a grade.

4. Students may not petition for credit by examination for a course in which they have been enrolled after the first two weeks of a semester, unless the dean and the appropriate faculty determine otherwise. Students should check with the appropriate division office for its actual policies.

5. Students must petition for credit by examination no later than the middle of the term unless the dean and the appropriate faculty determine otherwise. Students should check with the appropriate division office for its actual policies.

6. Only those courses listed in the catalog may be available to students for credit by examination. In addition, the course must be on the division's approved list of courses available for credit by examination.

7. Credit is not available for any course that is lower in a sequence than a course for which credit has already been granted, unless the dean and the appropriate faculty determine otherwise. Students should check with the appropriate division office for its actual policies.

8. The amount of credit permissible shall not exceed 15 semester units and not be more than 50% of the credit required for the major subject field.

Fees

Resident students will pay the same amount per unit as the current enrollment fee. Non-resident students will pay this same amount and the current appropriate non-resident tuition fee. These fees are non-refundable and payable at the Records Office. Students involved in the high school/ROC articulated programs would be exempted from paying this fee.

Procedures

1. Students requesting Credit by Examination will be referred to the College Records Office.

2. The Records Office will check the eligibility requirements.

3. Resident students will pay the same amount per unit as the current enrollment fee. Non-resident students will pay this same amount and the current appropriate non-resident tuition fee. These fees are non-refundable and payable at the Records Office. Students involved in the high school/ROC articulated programs would be exempted from paying this fee.

4. Students will take a completed petition form with the supporting documentation to the appropriate academic division. The academic division dean or designee, in consort with appropriate faculty, shall assess the qualifications of the student and approve or deny the petition. If approved, the academic division dean and faculty will agree upon compensation in accordance with the section of the Agreement on Overload Pay (Article X, Section 7(c) in the 2000-2003 Agreement).

5. If the petition is approved, the appropriate faculty will determine the form and content of the examination. Subject matter mastery and/or skills proficiency, as stated in the objectives of the course outlines of record, will be established by written examination, portfolio, skills demonstration or combination thereof. The dean or designee will notify the student to contact the appropriate faculty member for the examination arrangements.

6. The examination shall be graded and recorded only as credit/no credit and the results shall be recorded on the petition form sent to the division office and then forward to the Records Office. Examinations will be kept on file in compliance with the current policy for retention of exams.

7. The Records Office shall record credit/no credit in the student's permanent electronic file. When all eligibility requirements have been met, the Records Office shall record credit/no credit for the course on the student's official transcript. The petition, with recorded results, shall be filed in the student's folder. The Records Office shall notify the student of the results.

Restrictions

Units earned by examination are not to be considered a part of the student's subject load. Units shall not be used for reports to Selective Service, Social Security, Veterans Administration, or similar agencies and shall not be considered in verifying eligibility for athletics or student government.

Courses Eligible for Credit by Examination

Behavioral and Social Sciences Division
None

Business Division
Computer Information Systems 13

Fine Arts Division
Dance 1
Music 3A, 8A, 11, 12, 13, 15A, 15B, 31A, 31B, 31C, 31D, 32abcd
Theatre 1, 4

Health Sciences and Athletics Division
Contemporary Health 1, 3
First Aid 1
Nursing 48ab, 150, 151, 152, 153, 154, 155, 156, 250, 251, 252, 253, 254, 255,
Physical Education 260
Radiologic Technology A, 111, 123
Respiratory Care 170, 172, 174, 176, 178, 280, 282, 284, 286

Humanities Division
Chinese 1, 2
English 1A
French 1, 2, 3, 4
German 1, 2, 3, 4
Italian 1, 2
Japanese 1, 2, 3, 4
Spanish 1, 2, 3, 4

Industry and Technology Division
Administration of Justice 15, 70, 100, 103, 107, 109, 111, 115, 125, 126, 130, 131, 133, 134, 135, 136, 140, 170, 191
Air Conditioning and Refrigeration 5, 6, 21, 22, 23, 25, 27, 31, 32, 33, 34
Architecture 100, 104, 120abcd, 121abcd, 125abcd, 150A, 150B, 158, 170, 172, 199ab
Automotive Collision Repair/Painting 1A, 1B, 1C, 1D, 2A, 2B, 2C, 3A, 4abcd, 5abcd, 6abcd, 20, 22, 24, 26
Automotive Technology 1, 11, 14, 16, 21, 22A, 23, 24, 25, 31, 34, 43, 81
Computer Aided Design/Drafting 5, 10abcd, 28abcd, 31abcd, 32abcd, 33abcd, 34abcd, 37abcd, 45, 47, 49
Construction Technology 107abcd, 172, 180
Electronics and Computer Hardware Technology 11, 20, 110, 112, 120, 122, 124, 130, 131, 150, 152, 190, 191, 192, 193, 194
Engineering Technology 10, 12, 14, 16, 18
Environmental Technology 100, 110, 120, 130, 140, 150, 160, 200, 210
Fashion 3, 4ab, 10ab, 11ab, 14, 15ab, 16ab, 20, 24abc, 26A, 26B, 27, 28, 29ab, 31, 35, 41

Fire and Emergency Technology 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 14, 19, 20, 140, 141
Machine Tool Technology 2, 10A, 10B, 10J, 10K, 11abcd, 16ab, 40, 46, 101abcd, 103abcd, 105abcd, 107abcd
Manufacturing Technology 1, 2, 3, 70, 75
Nutrition and Foods 11, 15
Technical Mathematics 1
Welding 1, 2abc, 15ab, 19ab, 21, 23abc, 27ab, 40abcd, 45ab

Mathematical Sciences Division
None

Natural Sciences Division
None

Acceptance of Credit

Credits earned at other colleges which are accredited by one of the regional accrediting agencies are customarily accepted for transfer to El Camino College on receipt of an official transcript of record.

Students submitting transcripts from other colleges for the purpose of receiving a degree or certificate from El Camino College must submit an official college-to-college transcript. Transcripts delivered by students will not be considered for degree or certificate purposes.

Appropriate college level United States Armed Forces courses also may be accepted for credit.

Credit for Military Service

The experience of the veteran will be reviewed and any appropriate credit granted. Once El Camino College reviews and awards credit, it will become part of the veteran's permanent record. Credit will be awarded after completion of one semester of attendance at El Camino College.

A photostatted copy of the veteran's separation document (form DD 214) or discharge paper (including the side showing dates of induction and separation) must be on file. No credit is approved for the six-month Reserve program. Credit for military service is given according to length of service as follows:

- 90 days to 1 year: Contemporary Health 1 (3 units); Elective Credit (2 units)
- 1-2 years: Contemporary Health 1 (3 units); Elective Credit 4 units)
- 2 years or more: Contemporary Health 1 (3 units); Elective Credit (6 units)

Note: Veterans enrolling in Contemporary Health 1 will not be paid educational benefits for this course.

Audit of Courses

Education Code Section 76370 permits the Board of Trustees to authorize a person to audit a community college course.

A student may audit selected El Camino College courses with these provisions:

1. Priority in class enrollment shall be given to students desiring to take the course for credit toward a degree or certificate.

2. No student auditing a course shall be permitted to change his or her enrollment in that course to receive credit for the course. Students will not be permitted to earn credit by examination for audited courses.

3. A student wishing to audit a class must first obtain a petition to audit form in the Admissions Office. Registration for audit will occur no sooner than the second week of classes.

Fee for auditing a class shall be $15 per unit per semester (subject to change). Students enrolled in classes to receive credit for 10 or more semester credit units shall not be charged a fee to audit three or fewer semester units per semester. Fees are to be paid before auditing the course and fees are non-refundable. Classroom attendance of students auditing a course shall not be included in computing the apportionment due to the District.

Concurrent Enrollment of K-12 Students

Board Policy 5060

It is the policy of El Camino Community College District, subject to the relevant provisions of the California Education Code and the fulfillment of all El Camino College policies and procedures, to admit as concurrently enrolled students qualified high school students who have successfully completed the 10th grade and are currently enrolled in the 11th or 12th grade.

The Superintendent/President or designee shall develop procedures for the consideration of highly gifted K-10th grade students.

All high school students concurrently enrolled shall be exempted from the enrollment fee, Health Center Fee, and Representation Fee.

High school students would be required to pay all other required fees as adopted by the District.

F-1 Visa Procedure

International Students

El Camino College is approved by the U.S. Citizenship and Immigration Services as an institution of higher learning for non-immigrant F-1 and M-1 visa students. Prospective students may apply for admission from their homeland by requesting an application packet from the International Student Program office. Students attending another school in the United States on an F-1 visa may request a transfer to El Camino College by contacting our International Student Program office. International Students are encouraged to visit the International Student Program Web site at www.elcamino.edu/academics/is to download the application.

It is also possible for individuals whose B-type visas are stamped, "Prospective Student" (and certain other non-immigrant visas), to file papers through the International Student Program Office to attempt to change their status to F-1. The International Student Program office can provide prospective students with information regarding this procedure and the appropriate forms to file.

All international students who are attending El Camino College for the first time must attend an orientation before enrolling in classes. These orientations are scheduled just before the beginning of the fall and spring semesters. Therefore, new students should plan to begin their first semester at El Camino College in either the fall or spring. International students who fail to attend this orientation are subject to the loss of privileges.

International Student Application Procedures

Application deadlines are generally the first of July for the fall semester and the first of November for the spring semester. A packet of information giving time lines and procedures for applying to El Camino College is sent when a prospective student requests application materials. A non-refundable processing fee must be submitted along with the application and other necessary materials.

Prospective students may request an application packet by writing to the International Student Program, El Camino College, 16007 Crenshaw Blvd., Torrance, CA 90506 USA or by stopping by the International Student Program office in Room 101 of the Student Services Center. The application packet includes an official application, instructions for completing the application and submitting other materials, and other useful information. From the Internet go to www.elcamino.edu to download the application.

Before prospective international students can be considered for admission, they must: complete the application form including a recent photo; provide an affidavit of financial support; enclose the processing fee; provide transcripts of college and secondary grades translated into English and bearing the school seal and signed by the registrar or other appropriate official; provide official TOEFL

results (133 - computer-based test; 450 - paper-based test; 45 - internet based test) or proficiency level from an accredited language school. Information regarding the TOEFL can be found at www.cts.org.

Information about the TOEFL and registration forms may be obtained at American embassies and consulates, offices of the U.S. Information Service (USIS), U.S. educational commissions and foundations, and U.S.-sponsored learning institutions. Students may also write directly to ETS for information and forms at P.O. Box 899, Princeton, N.J. 08541, U.S.A. The El Camino College code for the TOEFL is 4302.

For students who were not able to achieve a satisfactory TOEFL score or who want to improve English language skills, El Camino College offers an intensive English program, the El Camino Language Academy (ECLA). The program is fourteen weeks in the fall and spring semesters and eight weeks in the summer. Applications for the academy are available at the International Student Program office or through the academy directly at www.uslanguageacademy.com.

After all application material is on file, it is reviewed to assure that the applicant qualifies for admission to El Camino College. When accepted, applicants are mailed the Certificate of Eligibility (I-20) along with further information about orientation and priority registration and helpful visa, travel and housing information. Prospective students are required to present the Certificate of Eligibility (I-20), proof of financial support, one photograph, a visa application form, and a receipt for the SEVIS I-901 fee to a U.S. Embassy or Consulate to apply for the F-1 Student Visa.

Note: International students are not guaranteed admission to El Camino College. Once capacity for the program for that term has been reached, no further consideration will be granted. F-1 visa students who miss the published deadline may be denied admissions to El Camino College.

English Proficiency

Classes are conducted in English, so it is necessary for the prospective F-1 visa student to be reasonably proficient in reading, writing and speaking English. New students must demonstrate proficiency before being issued the I-20 by having official TOEFL scores, which are not more than two years old, sent to the International Student Program office. A minimum TOEFL score of 133 CBT (computer-based test) or 450 PBT (paper-based test) or 45 IBT (internet based test) or completion of the equivalent level at an accredited language program is required. Prospective students outside the United States whose first language is English, or who can demonstrate English proficiency, may ask to have the TOEFL waived by contacting the El Camino College ISP desk.

Students who have been attending a school in the United States may also be able to provide an alternate proof of English proficiency. This is handled on a case-by-case basis by the International Student Program Coordinator.

All new students will also take the ESL Placement Test to determine placement in ESL or English classes. Placement Testing is part of the orientation schedule, but students who wish to take the placement tests before orientation may do so by contacting the International Student Program office for testing information. Students who have scored above 600 on the TOEFL, or whose native language is English, will take the regular English Placement Test.

Transcripts

Students applying for admission from outside the United States should send translated copies of all high school and college work they have completed. These transcripts should bear the original school seal and be signed by the registrar or an appropriate official of each college or secondary school attended.

Students already attending school in the United States should direct the Admissions Offices of any high schools, colleges or universities in the United States which they are attending, or have attended, to mail an official transcript directly to the International Student Program at El Camino College. Transcripts from any high schools, colleges, and technical or vocational schools attended in the student's native country, must also be sent to El Camino College. Transcripts must be translated into English and must bear the school seal and be signed by the registrar or appropriate school official.

Housing

Although there are no dormitories available at El Camino College, assistance with locating housing is available through the International Student Program Office. Information regarding housing is part of the information packet sent to students when they are accepted to the college.

Estimating Expenses

Attending El Camino College for the first two years of instruction is an economical way to obtain a college education in the United States.

Tuition, fees, and mandatory medical insurance at El Camino College for the 2009-2010 school year are approximately $2,650 for each 16-week semester or $5,300 for the academic year.

Textbooks and supplies may range from $400 to $600 for each semester. Room and board expenses vary depending upon the type of housing chosen, but may be estimated for the 10-month school year at $10,000.

An estimate of total expenses for the 10-month school year, including tuition and fees, textbooks and supplies, room and board and insurance, is $16,100. This does not include personal spending money.

Standards of Scholarship

Board Policy 4220

Semester Unit of Credit

College work at El Camino College is measured in terms of semester units. A unit is the value placed on three hours of the student's time per week in pursuit of educational goals; thus, for one hour of classroom lecture and approximately two hours study and preparation or for three hours of laboratory or shop work, one unit of credit is earned. The time allotment and unit value assigned to each course is designated as part of the course listing.

Grades and Grade Points

Grade points are numerical values which indicate the scholarship level of letter grades. Grade points are assigned according to the following scale:

A	Excellent	4 points for each unit
B	Good	3 points for each unit
C	Satisfactory	2 points for each unit
D	Passing	less than satisfactory 1 point for each unit
F	Failing	0 points for each unit
P	Pass	(at least satisfactory - units awarded not counted in grade point-average - See Note 1)
NP	No Pass	(less than satisfactory, or failing - units not counted in grade point average - See Note 1)
I	Incomplete	See Note 2
IP	In Progress.	See Note 3
W	Withdrawal	See Note 4

Notes:

1. Credit - No Credit

A certain number of courses are offered only on a P/NP basis while some others are offered on a P/NP or letter grade option depending on which the student selects during the fourth week of the semester. A student earning a P grade will receive unit credit toward graduation, but unit credit earned in these courses will not be considered when calculating grade point average. Designation of P/NP or option P/NP grading is included in the course description. All grades except W and P/NP will be considered in determining the grade point average. Grade point average equals total grade points divided by total units attempted for which grades have been assigned. While NP and W grades are not used in grade point determination, a student with an excessive number of withdrawals or NPs will be required to have special counseling and will be subject to probation or disqualification regulations.

2. I - Incomplete

Incomplete academic work for unforeseeable, emergency, and justifiable reasons that include circumstances beyond the student's control may result in an "I" symbol being entered in the student's record. A student receiving an "I" will be provided with a written record containing the conditions for removal of the "I." This record will be held for the student in the Records Office through the sixth week of the regular semester following receipt of the incomplete mark. If the student does not obtain the record and complete the required work by the end of the sixth week, the "I" will automatically be removed and a grade depending on incomplete work will be assigned.

Any extension of the time for completion of the required work must be approved by the division dean. The student should petition for the extension of time on a form provided by the Admissions Office.

3. IP - In Progress

In progress: the "IP" symbol shall be used only in those courses which extend beyond the normal end of an academic term. It indicates that work is "in progress," but that assignment of an evaluative symbol (grade) must await its completion. The "IP" symbol shall remain on the student's permanent record in order to satisfy enrollment documentation. The appropriate evaluative symbol (grade) and unit credit shall be assigned and appear on the student's permanent record for the term in which the course is completed. The "IP" shall not be used in calculating grade point averages. If a student enrolled in an "open-entry, open-exit" course is assigned an "IP" at the end of an attendance period and does not re-enroll in that course during the subsequent attendance period, the appropriate faculty will assign an evaluative symbol (grade A through F, P, NP) to be recorded on the student's permanent record for the course.

4. W - Withdrawal

To withdraw from a class or classes the student should make an official withdrawal in the Admissions Office. Withdrawal from a class or classes shall be authorized through the last day of the twelfth week of instruction. If a student remains in class beyond the twelfth week, a grade or an "I" (Incomplete) shall be assigned. A student who must withdraw after the twelfth week in extenuating circumstances may petition for assignment of a "W" grade. Extenuating circumstances are verified cases of accidents, illnesses or other circumstances beyond the control of the student.

No notation ("W" or other) shall be made on the academic record of the student who withdraws prior to the close of the fourth week of a semester course, or the first week of a six-week course or the second week of an eight or nine-week course. Any withdrawal occurring after the close of the fourth week through the last day of the twelfth week of the semester shall be recorded as a "W" on the student's records. A grade of "W" shall be assigned in six-week courses to students who withdraw between the first and the fourth weeks; and for eight or nine-week courses, the "W" grade is assigned to withdrawals occurring between the second and sixth weeks. In all other courses of less than one semester in length (other than six, eight, or nine weeks), no notation will be made on the academic record of the student who withdraws within the first 20 percent of the course; and a grade or "I" is entered on the record of the student who withdraws after 67 percent of the course.

The "W" shall not be used in calculating grade point averages, but excessive "Ws" shall be used as factors in probation and dismissal procedures.

5. Definition of an Academic Week

For purposes of this policy, a week of a semester is defined as one having at least three days of campus-wide instruction, as scheduled in the El Camino College calendar.

Probation Policies

1. Placement on Academic Probation

A. A student who has attempted at least 12 semester units, as shown by the academic record, shall be placed on academic probation following any semester when the grade point average for total units attempted at El Camino College is less than 2.0 (grade C).

B. Students who are placed on academic probation should see a counselor prior to registration for the semester subsequent to their receiving notice.

C. When a student is placed on academic probation for the fall semester, the student's program shall be limited to no more than 12 units plus one unit of physical education, if needed for graduation.

When a student is placed on academic probation for the spring semester, the student may be required to reduce the current program to 12 units plus one unit of physical education, if needed for graduation. This determination will be made by the counselor during the required meeting following receipt of notice of academic probation.

When a student is placed on academic probation for the spring semester, that student may enroll in no more than four units in the following summer session.

2. Removal from Academic Probation

A student shall be removed from academic probation upon earning a grade point average of 2.0 (grade C) or higher in total units attempted at El Camino College.

3. Progress Probation

A. Placement on Progress Probation

A student who has enrolled in a total of at least 12 semester units as shown by the official academic record, shall be placed on progress probation when the percentage of all units in which a student has enrolled and for which entries of "W" and "I", and "NP" are recorded reaches or exceeds fifty percent (50%). To drop a course and not have a grade entry appear on the official academic record or be counted as units attempted, action must be taken prior to the close of the fourth week of a semester course, the first week of a six-week course, or the second week of an eight or nine-week course.

B. Removal from Progress-Probation

A student on progress probation because of an excess of units for which entries of "W," and "I," and "NP" are recorded shall be removed from probation when the percentage of units in this category drops below fifty percent (50%).

4. Disqualification and Dismissal

A. Disqualification Because of Repeated Academic Probation

A student placed on academic probation will be dismissed when in the subsequent semesters the student's cumulative grade point average is less than 1.75. Dismissal will only occur following each

spring semester.

B. Disqualification Because of Repeated Progress-Probation

A student placed on progress-probation will be dismissed when in subsequent semesters the percentage of units in which the student has been enrolled, for which entries of "W", "I" and "NP" are recorded, reaches or exceeds fifty percent (50%). Dismissal will only occur following each spring semester. A disqualified student who returns after an absence of one or more semesters shall be permitted to enroll on continuing progress-probation.

C. A summer session will not count as the one semester of disqualification.

5. Readmission Following Disqualification

A disqualified student who returns after an absence of one or more semesters shall be permitted to enroll on continuing probation. To enroll, a student must see a counselor prior to the school-established registration period in order to arrange a program of courses in accordance with the student's aptitude and achievement ability.

6. Readmission Following Probation or Continuing Probation and Voluntary Withdrawal

A student on probation who withdraws voluntarily from college, either before the probation semester or during it, and later applies for readmission shall be readmitted in the same status as existed at withdrawal. However, a student may petition to apply accredited college work that was completed while in absence from El Camino College toward improving the academic probation status at El Camino College.

7. Incomplete Marks

"I" marks (incomplete) are not used in grade point calculations. However, for academic probation purposes, the grade assigned based on incomplete work is used to determine academic status.

8. Right of Petition

The student may appeal probation or disqualification status by petition if the individual feels an error has been made or there were extenuating circumstances. The petition shall be filed in the Admissions Office.

9. Change of Status

The academic probation status may not be changed because of "academic renewal" or "course repetition" as defined in another section of this publication.

Grade Change

Board Policy 4231

When grades are given for any course of instruction taught in the El Camino Community College District, the grade given to each student shall be the grade determined by the instructor of the course, and the determination of the student's grade by the instructor, in the absence of mistake, fraud, bad faith, or incompetency, shall be final.

A student who alleges that a grade in a course was given as a result of mistake, fraud, bad faith, or incompetency may appeal the grade within 18 months of the last day of the term in which the grade was given.

Procedures for appeal have been developed by the President/Superintendent or his designees in collegial consultation with the Academic Senate.

This policy supersedes the section of BP 4220 that deals with grade change procedures.

Course Repetition Policy and Procedures

Board Policy 4225

Students may repeat a course in which they have received a substandard grade (that is, D, F, or NP) only once. The new grade and credit will be substituted for the prior grade and credit in computing the grade point average (GPA) and the permanent academic record will be annotated in such a manner that all work remains legible, insuring a true and complete academic history.

In general, students are not permitted to repeat courses in which they have earned a grade of A, B, C, or P.

Students who have received a W in a course are permitted to re-enroll in that course two more times, for a total of three enrollments.

Specific exceptions to the above policies are detailed in administrative procedures.

This policy supersedes the section of BP 4220 (Standards of Scholarship) dealing with Course Repetition.

Procedures for implementing the policy will be developed with collegial consultation with the Academic Senate, as defined in CCR § 53200.

Course Repetition Administrative Procedure 4225

Repetition of a Course for Which a Grade of D, F, NC, or No Pass was Earned:

Students who have received a substandard grade (that is, D, F, or NC or No Pass) will be allowed to repeat that course a maximum of two times. Students will not be permitted to enroll for a third time except under extenuating circumstances or for "lapse of time" and upon written permission of the division dean and/or the director or assistant director of Admissions and Records. Extenuating circumstances are verified cases of accidents, illnesses, or other circumstances beyond the control of the student.

Upon completion of the repeated course, the previous grade and credit will be disregarded and the new grade and credit will be substituted in computing the grade point average (GPA). Note: Although the previous grade is disregarded in the computation of the GPA, it must remain permanently on the academic transcript.

Students who have received a substandard grade who then successfully complete an equivalent course at another accredited institution may petition the Records Office to have the previous grade and credit disregarded in computing their GPA and to have their academic record annotated.

If the course is one with lowercase letters such as Chinese 11ab or Journalism 11abcd and students repeat a course to alleviate a substandard grade, they can petition the Records Office to have the previous grade and credit disregarded in computing their GPA and to have their academic record annotated.

Nothing in the policy and procedure on Course Repetition can conflict with Education Code §76224 pertaining to the finality of grades assigned by instructors or with Title 5 or district procedures relating to the retention and destruction of records.

Repetition of a Course for Which a Grade of A, B, C, CR, or Pass was Earned:

Students who have received a grade of A, B, C, CR or Pass in a course may repeat the course only under the circumstances listed below:

1. A student may repeat a course if, upon written petition to the dean of the relevant division, the district determines that the student's previous grade is, at least in part, the result of extenuating circumstances. Extenuating circumstances are verified cases of accidents, illnesses, or other circumstances beyond the control of the student. The new grade and credit will not be counted towards the student's total units or GPA.

2. A student may repeat a course if, upon written petition to the dean of the relevant division, the district determines that repetition is appropriate to the student's goals because of a significant lapse of time. The new grade and credit will not be counted towards the student's total units or GPA.

3. A student may repeat any number of times courses which are necessary to meet a legally mandated training requirement as a condition of continued paid or volunteer employment. The district maintains a list of courses to which this procedure applies. The resulting grades and credits will be counted towards the student's GPA.

4. A student may repeat courses with lower case letters (for example, Chinese 21ab or Journalism 11abcd) up to the number of letters (that is, Chinese 21ab may be taken a total of two times and Journalism 11abcd a total of four times). No special permission is required, and all credits and grades earned will be included in the student's GPA.

Withdrawal and Re-enrollment:

A grade of W may count as a repetition for the purposes of this policy. However, college policy allows a student to re-enroll in a specific course in which the student has received a W only two more times, for a total of three attempts. Any exception to this policy requires the student to file a petition for excessive repeats.

Courses Designed for Students with Disabilities:

The limitations detailed in this procedure do not apply to special courses designed for students with disabilities. Such courses are defined as being taught by an instructor with minimum qualifications established by Title 5, § 53414, such as a master's degree in rehabilitation counseling. However, when such students take regular classes, they are subject to the same repetition limitations as other students.

Additionally, procedures have been developed to ensure that students are not permitted to enroll in courses for which they are not eligible and to ensure that the college's apportionment claims are in compliance with the California Code of Regulations and Title 5 § 58161 in this regard.

Limitation to Remedial Coursework

Board Policy 4115

It is the policy of El Camino College that a student shall not receive credit for more than 30 units of remedial (pre-collegiate basic skills) course work at El Camino College. This limitation does not apply to:

1. A student enrolled in an English as a Second Language course.
2. A student identified as having a learning disability.

A student may be granted a waiver to the 30-unit limit upon petition. Waivers will be granted only if the student shows measurable progress towards the development of skills necessary for success in college-level courses.

Procedures for implementing this policy will be developed by the Superintendent/President in collegial consultation with the Academic Senate.

Academic Renewal Policy and Procedures

Board Policy 4240

It is the policy of El Camino College to allow previously recorded substandard academic work to be disregarded if it is not reflective of a student's more recently demonstrated ability and if repetition is not appropriate to the current objectives of the student. A student may petition to have up to 24 semester units of substandard work (D, F or WF grade assigned) taken at El Camino College disregarded in determining the student's grade point average.

Procedures for implementing the policy will be developed with collegial consultation with the Academic Senate, as defined in CCR Title 5, Section 53200. This policy supersedes the section of BP 4220 dealing with Academic Renewal.

Academic Renewal Academic Procedure 4240

A student may petition to have up to 24 semester units of substandard work (D, F or WF grade assigned) taken at El Camino College disregarded in the determination of the grade point average (GPA), subject to limitations as follows:

1. The student must have earned a GPA of 2.25 or higher in the last 30 units of graded work, or 2.5 or higher in the last 24 units of graded work, completed at any regionally-accredited college or university.
2. At least two years must have passed since the end of a semester with a grade to be disregarded.
3. A student may be granted academic renewal at El Camino College only once.
4. Units disregarded by other institutions shall be deducted from the 24 semester units maximum of course work to be disregarded by El Camino College.
5. Course work with disregarded grades may not be used to meet degree or certificate requirements.

Academic renewal actions are irreversible.

Students requesting Academic Renewal may obtain an Academic Renewal Petition in the Records Office.

The student's permanent academic record shall be annotated to indicate all disregarded course work, but all grades shall remain legible to ensure a true and complete academic history.

If another accredited college has removed previous course work from associate in arts or bachelor's degrees consideration according to terms of that institution's policy, such an action shall be honored by El Camino College.

It is the student's responsibility to ensure that any institution or program to which he or she is applying will accept Academic Renewal from El Camino College.

These procedures supersede the provisions of BP 4220 dealing with Academic Renewal.

El Camino College Student Rights and Responsibilities

Student rights and responsibilities are outlined in Board Policy 5506. This policy, which is accessible at offices throughout the college, states that students have rights and responsibilities as provided for in law, including the State Education Code and the Title 5 Matriculation regulations; Board policies, including the Student Code of Conduct; and health and safety considerations.

Discrimination/Sexual Harassment Complaints

El Camino College is committed to providing equal opportunity in education and employment. The college affirms its policy to provide fair and equitable treatment of students and employees and to prohibit discrimination on the basis of ethnic group identification, national origin, religion, age, sex (harassment), race, color, ancestry, sexual orientation, physical or mental disability, or retaliation.

Students or employees with questions, concerns or complaints of discrimination may contact and/or file an official complaint with the offices or agencies listed below to initiate an El Camino College discrimination investigation.

It is the policy (Board Policy 1600) of the El Camino Community College District to encourage full inclusion of people with disabilities in all programs and services. Accommodations and alternative formats are available upon request by calling 310-660-3296.

In compliance with Board Policy 1600, a screen-reader friendly copy of this document may be found at www.elcamino.edu and/or a copy of this document in alternative formats is available upon request by calling 310-660-3406.

Quejas de discriminación o acoso sexual

El Camino College está comprometido a brindar igualdad de oportunidades de empleo y educación. Esta institución reitera su política de proveer un trato justo y equitativo a los estudiantes y empleados, y prohibir la discriminación basada un raza, color, descendencia, religión, sexo (incluyendo acoso sexual), origen nacional (incluyendo limitaciones de idioma) edad, incapacidad (mental o fisica) incluyendo VIH y SIDA, condición médica (cáncer o características genéticas) estado civil, orientación sexual, estado de veterano, y negación de licencia o acomodación razonable por maternidad.

Los estudiantes y empleados con preguntas, dudas o quejas de discriminación pueden comunicarse y/o presentar una queja oficialmente en las oficinas o agencias que se nombran a continuación, para iniciar una investigación de discriminación por parte de El Camino College.

La pólitica de la Mesa Directiva del Distrito de El Camino College (Regla 1600 de la Mesa Directiva) es promover inclusión completa en todos los programas y servicios. Acomodación y servicios alternativos están disponibles para estudiantes que los requieran llamando al 310-660-3296.

De acuerdo con la Regla 1600 de la Mesa Directiva, una copia de este documento, fácil de leer, está disponible en www.elcamino.edu o se puede obtener una copia de este documento llamando al 310-660-3406.

Students/Employees: You may file an official complaint with the appropriate offices or agencies to initiate an El Camino College discrimination investigation:

- ❑ El Camino College Equal Employment Officer-
  Administration Building, Rooom 210,
  310-660-3593 x3813 (Students/Employees)
- ❑ California Community Colleges System Office
  Attention: Legal Affairs Division
  1102 Q Street, Sacramento, CA 95814-6511
  (Students/Employees)
- ❑ U.S. Department of Education, Office for Civil Rights,
  Old Federal Building 50 United Nations Plaza,
  Room 239, San Francisco, CA 94102 (Students)
- ❑ California Department of Fair Employment and Housing,
  611 W. Sixth Street, Suite 1600, Los Angeles,
  CA 90017-3116 (Students/Employees)
- ❑ U.S. Equal Employment Opportunity Commission,
  255 E. Temple Street, 4th Floor, Los Angeles, CA 90012
  (Students/Employees)

Sexual Harassment Policy

It is the policy of the El Camino Community College District to provide an educational, employment, and business environment free of unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communications constituting sexual harassment as defined and otherwise prohibited by state and federal statutes. Within the El Camino Community College District, sexual harassment is prohibited regardless of the status and/or relationships the affected parties may have.

Sexual harassment violates the policy of the District and provisions of the California Fair Employment Act, Education Code and federal rules, regulations and laws, prohibiting sexual harassment.

Sexual harassment complaint forms are available in the Office of the Director of Staff and Student Diversity.

Sexual harassment shall be immediately reported to the District's Title IX Coordinator, Director of Staff and Student Diversity or designee, or to any dean, director, or manager for **immediate** reporting to the District's Director of Staff and Student Diversity or designee.

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Student Services

Bookstore Services

The El Camino College Bookstore is located on the north side of campus, adjacent to the staff parking lot off the Manhattan Beach Boulevard entrance at Lemoli Street. The bookstore is owned and operated by El Camino College. Regular hours are normally 7:30 a.m. to 7:00 p.m. Monday through Thursday and 7:30 a.m. to 4:00 p.m. on Friday.

Textbooks can be returned for a full refund during the first week of the fall and spring semesters. Textbooks purchased for winter and summer sessions can be returned the first three days of the sessions for a full refund. Textbooks must be in the original condition and a student must have his/her register receipt for a full refund. Contact the Bookstore for further refund information.

The Bookstore buys books back on a daily basis. The best time to sell your books is during the last week of a semester or session. The Bookstore will pay up to 50% of the original cost on textbooks that are being used for the next term.

Textbooks may be purchased online at www.elcamino.edu. Click on the Bookstore and order textbooks for home delivery or in store pick-up.

Proceeds from the Bookstore are used to support the Auxiliary Services Fund and site improvement projects on campus.

Cashier's Office

The Cashier's Office is located on the main floor of the Administration Building and is open from 9:00 a.m. to 6:00 p.m. Monday through Thursday and from 9:00 a.m. to 12:00 p.m. on Friday. Students may pay fees, make class changes, obtain class printouts, purchase parking permits and the Associated Student Body activity sticker. Students may purchase discounted theater and amusement park tickets at the Ticket Office, located at the Marsee Auditorium.

Counseling Services

Counseling services are made available to students through scheduled appointments. Appointments to meet with a counselor must be made one week in advance through the Counseling Services Center. A student who has selected a major field of study is strongly encouraged to see one of the counselors assigned to that field; an undeclared or undecided student may see any counselor.

As an integral part of the matriculation program, counseling services are particularly intended to assist students in clarifying career and life goals and in developing an appropriate course of study based on a student's goals, aptitudes and interests.

Express Counseling is usually available Monday through Thursday from 8:00 a.m. to 7:00 p.m. and Fridays from 9:00 a.m. to 1:00 p.m. for students who have questions which do not require transcript review. The Express Counseling schedule is subject to change based on counselor availability. Please call, 310-660-3458 for the Express Counseling daily schedule.

Career Center Services

Career Center services are offered Monday through Thursday from 8:00 a.m. to 7:00 p.m. and Friday from 9:00 a.m. to 1:00 p.m. The Career Center is located in the Counseling Division on the first floor of the Student Services Center. Opportunities for extensive exploration and evaluation of interests, aptitudes, skills, and other characteristics related to vocational and pre-professional planning and job success are available.

Appointments for career exploration assessments and counseling are available to students and alumni. Career fairs, tours, and career orientations are scheduled throughout the year.

The Career Center has information, including books, Internet resources, magazines, video cassettes, occupational files, and a computerized career information system, describing thousands of jobs and providing information on local, state, and national job markets.

Career and job search booklets are also available in the Career Center. For more information, please call 310-660-3593, extension 6137.

CalWORKs/TANF Services

The CalWORKs Program offers a wide array of services to parents who are receiving Temporary Assistance for Needy Families (TANF) and those in transition from welfare to long-term self-sufficiency. Services include a) Interim Child Care Assistance for students not yet eligible and/or other temporary issues which prevent them from being eligible for county, b) On-Site GAIN Social Workers from Regions I and V that assist with county related matters, c) Career Counseling to assist students with choosing a career that fits personal interests and abilities, d) Academic Advisement and Assistance where educational plans are developed for students on an individual basis, and e) Work Activity and Job Placement Assistance which assists students with their required 32 hour per week compliance.

The office is located in the Student Services Center building, Room SS205B. Office hours are Monday and Thursday, 8:00 a.m. to 5:00 p.m., Tuesday and Wednesday, 8:00 a.m. to 7:00 p.m. and Fridays, 8:00 a.m. to 1:00 p.m. Students can be seen by appointment or during drop-in hours. For more information, please contact the CalWorks office at 310-660-6057. Ask about the "Refer A Friend" campaign.

Child Development Center

The El Camino College Child Development Center is located across Redondo Beach Boulevard from campus in a fully-equipped million dollar facility with licensed and credentialed teachers and staff. The Center is accredited by the National Association for the Education of Young Children.

The Center offers two programs. Both are open to the public as well as to students, staff, faculty, and their families. The Child Development Center provides these services:

- A fee-based day program for children ages 2 years old (toilet trained) through 5 years old. Hours for these services are 6:45 a.m. to 5:30 p.m. Monday through Friday.
- State Funded Pre-School: A free program for children ages 3-4 by December 2. Enrollment is based on family income. The program operates two sessions, Monday through Friday, 8:30 a.m. to 11:30 a.m. or 12:30 p.m. to 3:30 p.m. A child may only be enrolled in one of these sessions. Call the Center for eligibility information.

Application packets are available in the Child Development Center. For information, call 310-660-3720. A grant program is available for qualifying student parents.

Extended Opportunity Programs and Services (EOP&S)

The EOP&S/CARE programs provide students with support services in the areas of counseling, transfer, tutorial, and financial services. A supplemental CARE program is offered to single parents receiving CalWORKs benefits. Eligible students must meet the BOGW income level and have an educational need. The program offers priority registration, counseling, progress monitoring, transfer fee waivers, grants, emergency loans, and book vouchers. In addition, CARE students are eligible for meal tickets, child care assistance, and auto repairs.

EOP&S peer advisors assist students with understanding college life as it relates to their personal, financial and academic issues. Tutorial services offer a computer lab for eligible students and tutor assistance on a variety of academic subject areas.

EOP&S/CARE is located in the Student Services Center, Rooms 202, 203, and 204. For information, call 310-660-3466.

Career Placement Services (CPS)

Career Placement Services (CPS) is located in the Student Services Center, Room 204, and is open from 8:00 a.m. to 4:30 p.m., Monday through Thursday and Friday from 8:00 a.m. to 1:00 p.m. The Web site address is www.elcamino.edu/studentservices/cps. CPS provides current students and alumni who have completed a minimum of 15 units at El Camino College opportunities to find part time and full time jobs, as well as seasonal, summer and temporary employment, including internships. A comprehensive job board and a computer lab allow students to search for jobs in the local area. The computer lab may also be used to explore online job search engines, fill out online employment applications, and write a resume and/or cover letter.

The CPS staff develops internship opportunities for students in every academic area. Internships provide students the opportunity to explore a variety of career fields. Most internships are non-paid (though some are paid), short term, career experiences which allow students to explore a profession. Many require only a few hours a week during a semester or a summer session. See www.elcamino.edu/studentservices/cps/internships/openinterns.asp for an updated list. CPS also assists students in writing resumes and cover letters as well as preparing for interviews. Resume workshops are regularly scheduled and mock interview appointments can be made with the advisor.

Several Job and Internship Fairs are held each semester. Individual employees also come to campus to recruit on a regular basis. Check the campus calendar at http://www.elcamino.edu/uportal/calendar/select_cal.aspx; select Career Placement Services for updates regarding CPS services and events.

Learning Resources Center (LRC)

The LRC offers academic support services and resources – tutoring, instructional software and media materials, individualized instruction in basic reading and math, and open-access computer labs – at no cost to all El Camino College students. All LRC services located in the library are open during Library service hours. For additional information, visit http://www.elcamino.edu/library/lrc or call 310-660-3511.

The Learning Resources Center is dedicated to helping students, faculty, and staff of El Camino College achieve their academic goals. The LRC offers programs to enhance teaching and learning and provides users with learning opportunities through their use of audio-visual materials, computer assisted instruction, and tutorial services in the following areas:

The **LMTC Computer Commons** (Library – East Wing, basement) is El Camino College's central computer facility that provides all students and disciplines with a general use drop-in computer lab. The Computer Commons uses fully networked Windows computers where students have access to a variety of resources including color and laser printing, scanning, adaptive access tools and Internet access on over 160 computers. Software includes word processing, database, spreadsheet, presentation, and graphics programs. Specialized applications support academic programs including business, computer science, fine arts, health sciences, nursing, English, ESL, and foreign languages.

The **Basic Skills Study Center** (Library – North Wing, upper level) provides individualized computer-assisted instruction in basic reading and basic math. Students may register for the course Academic Strategies 1abcd (AS 1abcd) or participate in a non-credit drop-in study program. Entering students will be given a diagnostic placement test and a personal plan of study. Both Academic Strategies and drop-in students will be provided with access to various software tutorial applications.

The LRC Tutorial Program (Library – West Wing, upper level) offers free drop-in tutoring for over 40 subjects including, but not limited to, English, ESL, Mathematics, Chemistry, Economics, Business, Biology, Music, and foreign languages. All tutoring, whether located in the LRC or in satellite locations around the college, is provided by highly trained, nationally certified tutors. The current tutoring schedule is posted in the Learning Center and at the following site: http://www.elcamino.edu/Library/lrc/tutoring.

The **Learning Center** (Library - West Wing, upper level) houses an extensive media-materials collection that supplements instruction in many academic disciplines. The media-materials collection includes audio and video tapes, rocks, disarticulated skeletons, human anatomy models, maps, text materials, art, and much more. Equipment is also available for viewing videos and creating copies of audio recordings.

Library

The Schauerman Library is an excellent facility with more than 120,000 volumes and hundreds of newspapers and periodicals, making it the research center of campus.

During the fall and spring semesters, the library is open from 7:30 a.m. to 9:00 p.m., Monday through Thursday, from 7:30 a.m. to 4:30 p.m. on Friday and from 9:30 a.m. to 2:30 p.m. Saturday. The winter and summer session hours vary (please call the library for these hours). The library is closed when classes are not in session.

Materials are grouped throughout the facilities for easy use in Reference and Reserve/Periodical Rooms as well as in the general collection book stacks. Open stacks are maintained to give students direct access to all books. The Reserve Room contains material required for some supplementary assignments and a collection of textbooks including the Book Depot.

The Reference and Periodical Rooms provide materials for research. Computers are available to support library research via online databases and Web access. Online book catalogs are located throughout the library. The Library Media Technology Center is located in the East Wing basement and provides computers for word processing, scanning, and web access.

A fine of 25 cents a day is charged for overdue circulating books, with a maximum of $5 for hardcover and $3 for paperback. A three-day grace period is allowed at the end of each semester. Lost books are charged at the rate of the cost of the book plus $10 processing fee.

The facility uses the Library of Congress classification system.

The library lobby is frequently used as an adjunct art gallery, displaying works by area artists.

Special Resource Center

The mission of the El Camino College Special Resource Center (SRC) is to facilitate academic success for students with disabilities by providing equal access to educational opportunities in an integrated campus setting.

Students with disabilities are an integral and vital part of the El

Camino College community. The SRC provides support services, adaptive equipment, computer technology, and specialized instruction to serve students with verified disabilities. The SRC provides accommodations for both academic and extracurricular college activities. The SRC's primary goal is to provide accommodations necessary to assist students with achieving their educational and vocational goals while promoting self-advocacy and independent learning. The SRC Office promotes shared responsibility with the student, instructor, and college staff for student success. The assistance provided by the SRC is in addition to services and instruction otherwise available to all students.

In order to be eligible for support services, equipment, or instruction, a student must have verification of his/her disability.

Support services are provided on an individual basis as agreed during consultation with a counselor or specialist. Services may include: registration assistance; educational development courses, academic or vocational counseling; educational and diagnostic assessment; American Sign Language and oral interpreting; Braille transcribing; alternate format materials; student skill assistance; testing accommodations; or equipment loans. Support services are directly related to the educational limitations of the verified disabilities of the students to be served. Support services promote the maximum independence, integration, and participation of students with disabilities in the educational process and activities consistent with the mission of El Camino College. (Please refer to ECC Board Policy 1600).

Special classes are available with curriculum designed to provide specialized instruction for various types of disabilities and learning styles. These special classes are listed under Educational Development in the catalog. The Adapted Physical Education Program (APE Program) is available for students who may benefit from physical education offerings with adaptation and personalized instruction. These activity courses are listed within the Physical Education section of the catalog and schedule of classes.

All students seeking admission to El Camino College must meet these levels of independence:

- The ability to negotiate the campus facilities independently or with the assistance of their own attendant;
- The ability to take care of personal needs (feeding, toileting) unassisted or to provide one's own attendant care; and
- The possession of a stable level of health to benefit from a full semester's work.

The SRC does not provide assistants for personal use.

The Special Resource Center is located on the east side of the Student Services Center. Please visit or contact us.

- Telephone: 310-660-3295; 310-660-3445 TTY
- E-mail: srchelp@elcamino.edu
- Web site: www.elcamino.edu/academics/src

Student Health Services

Student Health Services is located on the south side of campus, adjacent to the swimming pool. Walk-in hours are Monday, 8:30 a.m. to 5:00 p.m., Tuesday, 8:30 a.m. to 12:30 p.m., Wednesday, 8:30 a.m. to 4:30 p.m., Thursday, 8:30 a.m. to 1:00 p.m. and 3:00 p.m. to 7:00 p.m., and Friday, 8:30 a.m. to 12:00 p.m. HIV Clinic hours are on Tuesday from 1:00 p.m. to 4:00 p.m.

The Health Center is staffed by nurse practitioners, registered nurses, physicians, clinical psychologists, and chiropractors. Students are seen on a walk-in basis or may be scheduled for an appointment with physicians, psychologists, nurse practitioners, or chiropractors.

Some of the free services provided are general medical care and treatment, first aid, family planning, and health education. Short term psychological counseling on an individual basis by psychologists is free of charge. Lab services such as Pap smears, blood tests, or pregnancy tests are available at low cost.

Workshops on health-related issues such as stress management, test anxiety, assertiveness training, improving communication skills and anger management are also offered through Student Health Services.

Health services are provided for students 18 years of age or older who pay the mandatory health fee. High school students permitted to attend the college on a concurrent enrollment basis are not eligible for health services. College students under 18 years of age subject to other admissions criteria must pay the health fee and submit a parental or guardian consent form to receive health services.

Student Services Center

The Student Services Center building includes Admissions and Records, Counseling Services, Transfer and Career Services, and the Special Resource Center on the first floor. The Financial Aid Office, Career Placement Services, EOP&S, First Year Experience, and the Assessment/Testing Center are on the second floor. The Ask Me information desk in the foyer, staffed during most hours the building is open, has a variety of information available including campus maps and brochures and other information on courses, special events, and campus activities. Building hours are normally from 8:00 a.m. to 6:30 p.m., Monday through Thursday and 9:00 a.m. to 12:30 p.m. on Friday.

Assessment/Testing Center

The Assessment/Testing Center is located in Room 217, on the second floor of the Student Services Center building. English, ESL and Mathematics Placement Testing is computerized and available on a drop-in basis according to posted hours. Placement into classes is based upon test scores and other multiple measures.

In addition to English, ESL, and Mathematics Placement Tests, the Assessment/Testing Center also administers the following exams: Ability-to-Benefit, Chemistry Placement, Contemporary Health, DRP, and Mathematics Competency. Contact the Assessment/Testing Center for further information or refer to the El Camino College Testing Web page at www.elcamino.edu. Click on Current Students then Assessment and Testing.

Transfer Center Services

Transfer services are offered Monday through Thursday from 8:00 a.m. to 6:30 p.m. and on Friday from 9:00 a.m. to 1:00 p.m. in the Counseling Services Center on the first floor of the Student Services Center building. The Transfer Center offers a wide range of activities designed to assist students in transferring successfully to the four-year college or university of their choice.

Among the transfer services offered are professional transfer counseling and advisement, regularly scheduled visits by recruiting and admissions officers from four-year colleges and universities, and workshops on major steps in the transfer process. Other services offered include university fairs on the El Camino College campus and frequent field trips to an array of major universities. A calendar of Transfer Center activities is published monthly and is widely distributed. A transfer guide is published each semester. Also, information about public and private colleges and universities is available through the Transfer Center. Visit us online at http://www. elcamino.edu. Go to Counseling Services for links to help you: Choose and apply to universities online, take virtual campus tours, explore majors, and much more.

Veterans Services

The Veterans Administration pays education benefits to veterans, service persons, those in the National Guard or active reserves, and eligible dependents and survivors of totally disabled or deceased veterans under a number of benefit programs. Students eligible for these benefits must apply for them each semes-

ter through the El Camino College Veterans Office located in the Admissions Office (Student Service Center Room 101), telephone number 310-660-3486. With a counselor approved educational plan, the El Camino College Veterans Office certifies courses required for a certificate program, the associate degree, and for transferable four-year degrees on behalf of the Veterans Administration.

Students collecting V.A. educational benefits must achieve satisfactory progress. If the student falls below graduation standards (2.0 GPA) or is on progress probation for two consecutive semesters, El Camino College is required to notify the V.A. The V.A. will terminate benefits unless it can be shown that the student is pursuing an appropriate objective and has a reasonable chance for success in the chosen program.

Veterans with service disabilities may be eligible for a special vocational rehabilitation program offered by the Veteran's Administration. Contact the local V.A. office for more information at 1-800-827-1000.

The California Department of Veterans Affairs provides a tuition waiver program to eligible dependents and survivors of disabled and deceased veterans. Applications are available in the El Camino College Veterans Office, by calling 213-744-4825, or at www.cdv.ca.gov.

Because timely receipt of benefit checks cannot be assured by the V.A., especially at the beginning of each semester, students should not depend on them for their beginning of the semester expenses. It is also the responsibility of the student to notify the El Camino College Veterans Office of any change in unit load during the semester.

In most cases, eligibility for benefits expires 10 years after last discharge or release from active duty. For more information, call the Veteran's Administration toll free information line at 1-800-827-1000, the Education Service line at 1-888-442-4551, or go to www.gibill.va.gov.

Writing Center

The Writing Center, located in Humanities 122, serves all El Camino College students who need assistance with writing and reading. The Center offers either one-on-one conferences with highly qualified tutors, all of whom have a bachelor's or master's degree, or computer-assisted instruction on Microsoft Word, Internet access, and the use of composition, editing, or reading software. In addition, the Center offers weekly workshops on grammar, documentation, and specialized writing tasks such as cover letters and resumes.

To receive services, students must bring their El Camino College identification card, a disk or flash drive if they intend to save their work, and a writing assignment from class if they intend to request a writing conference.

All services are drop in; no appointment is necessary. A referral from an instructor or counselor is desirable. Writing Center hours are 8:00 a.m. to 6:00 p.m., Monday through Thursday; 8:00 a.m. to 4:30 p.m., Friday. The Center phone number is 310-660-3873. Please visit the Center's Web site for more information: http.www.elcamino.edu/academics/humanities/writingcenter/index.asp.

Student Development

The El Camino College Activities Center serves as headquarters for all student organizations.

The center, usually open from 8:00 a.m. to 5:00 p.m. Mondays through Fridays, offers a social atmosphere where students may meet and mingle or study between classes. The building is headquarters for Associated Students, the Student Senate, Inter-Club Council, Alpha Gamma Sigma, and all related activities.

Everyone who is registered at El Camino College is a member of the Associated Students. Officers of the organization are elected each year. Associated Students sponsors programs and services to benefit the entire student body.

Student Senate

Each of the college's academic divisions is represented on the Student Senate by two elected students. The Senate is concerned with the total student body and acts as a point of communication between the academic divisions and students.

The Director of Student Development is assisted by a professional staff which works with the membership to sponsor such activities as workshops, lectures, and social events.

Overall leadership of the Senate is provided by the Associated Student President and three Directors. The President, the Director of Finance, the Director of Academic Affairs, and the Director of Student Services are elected at large in the spring.

Student Representative

A student is elected each spring to represent the students for one year on the Board of Trustees of the El Camino Community College District. The representative participates fully with the Board except in matters of personnel or pending litigation.

Inter-Club Council

The Inter-Club Council is comprised of representatives from campus clubs and sponsors activities including homecoming, the semi-annual blood drive, a holiday party for children, and the international food fair. There are a variety of clubs available for students to join including honorary, service, cultural, performing arts, and special interest organizations. Information on forming a club or joining one is available in the Office of Student Development.

Alpha Gamma Sigma

Alpha Gamma Sigma, the Honor and Scholarship Society at El Camino College, was founded to help promote, maintain and recognize scholastic achievement and community service among students. Because AGS also is a student club and one of the largest organizations on campus, it attracts many students, of all majors, pursuing academic excellence. In addition to supporting the academic endeavors of its members through study groups, tutorials and scholarship opportunities, the club also offers ways to gain leadership positions, participate in community service, and meet others with similar academic interests. For information on joining AGS and to obtain an application, contact the Student Development Office.

Financial Aid

El Camino College offers a variety of financial aid programs to help students with education-related expenses. These include grants, employment (Federal Work-Study), scholarships, and loans.

Detailed information, application forms, and professional financial aid advising are available in the Financial Aid Office in Room 215 of the Student Services Center. Application Workshops are available to assist students with Financial Aid applications. Call or visit the Financial Aid Office for workshop schedules.

To qualify for financial aid and maintain eligibility for the programs, federal and state regulations indicate that you must:

- ❑ Apply for financial aid using the Free Application for Federal Student Aid (FAFSA), the renewal FAFSA, or online at www.FAFSA.ed.gov;

- Be a United States citizen, permanent resident, or eligible non-citizen;
- Be a high school graduate or have completed the GED or passed an independently administered test that is approved by the Secretary of the Department of Education (Ability to Benefit or ATB);
- Be enrolled in good standing.;
- Maintain Financial Aid Satisfactory Academic Progress;
- Demonstrate financial need;
- Be registered with Selective Service if you are a male between 18 and 25 years old and not a current member of the active armed forces;
- Not be in default on any educational loan and not owe a refund on a grant received for attendance at any post-secondary institution.

Federal Refund Requirements

Students who withdraw from all classes prior to completing 60% of the semester will have their financial aid eligibility recalculated. Based on the percentage of the semester completed, students will be required to repay any unearned financial aid they received.

At El Camino College, a student's withdrawal date is:

1) the date the student officially notified the Admissions Office of his or her intent to withdraw, or

2) the midpoint of the semester for a student who leaves without notifying the college, or

3) the student's last date of attendance at a documented academically-related activity.

Cal Grant B

Cal Grant B awards range from $776 to $1,551 at community colleges. This grant provides subsistence payments for entering freshmen with no more than one semester full-time or 16 units of part-time coursework completed. The funds may be applied toward living expenses, books, supplies, and transportation.

Cal Grant B Entitlement Award

This award is for graduating high school students and students who graduated high school during the previous year who have at least a 2.0 grade point average. Students in this category must also fall within certain family income and asset ceilings. Students must apply within a year of graduating and meet the March 2 deadline for filing the FAFSA and GPA Verification Form.

Cal Grant C Information

Cal Grant C awards assist students in occupational career training programs with paying tuition costs for students enrolled at community colleges. Selection is based on GPA, education and employment history, vocational aptitude, and financial need. Course length must be at least four months. Cal Grant C is not for students pursuing a four-year college degree.

California Chafee Grants

The California Chafee Grant Program awards up to $5,000 a year for vocational and technical training or college for current or former foster youth. To apply, you must complete the Free Application for Federal Student Aid (FAFSA) and the California Chafee Grant application, which is available online at **www.chafee.csac.ca.gov**.

Child Development Grant

The Child Development Grant Program is designed to encourage students to enter the field of child care and development in a licensed children's center. Students must be enrolled at least half time in coursework leading to a Child Development Permit. Eligible students may receive up to $1,000 per year.

Federal Pell Grant

The Federal Pell Grant is a federally funded program that assists students in paying for their education after high school. The Federal Pell Grant awards for full-time students range from $400 to $4,731 a year. Federal Pell Grant awards are available only to students who have not received a bachelor's degree.

Federal Supplemental Educational Opportunity Grant

The Federal Supplemental Educational Opportunity Grant is a federal program designed to supplement other sources of financial aid for students with exceptional need who are eligible for a Federal Pell Grant. FSEOG awards range from $100 to $600 per year, depending on need and availability of funds.

Academic Competitiveness Grant

The Academic Competitiveness Grant award is for students who graduated from high school after January, 2005. Students must have completed rigorous high school academic courses and be enrolled full time. Academic Competitiveness Grant awards range from $750 to $1,300 a year.

Aid for Native Americans

Native American students are entitled to receive educational assistance from the Bureau of Indian Affairs. Applications for BIA grants and vocational assistance are available from U.S. Bureau of Indian Affairs regional offices or by writing the Bureau's Office of Indian Education, 2800 Cottage Way, Sacramento, CA 95825.

Federal Work Study

Students may earn $8.00 an hour, or more depending upon job assignment. Students may work 20 hours a week while school is in session and up to 40 hours a week during break periods. Funding is based on financial need and available funds.

Federal Parents Loan For Undergraduate Students (PLUS)

PLUS loans provide funds to qualified parents of dependent students. The interest rate is variable and is adjusted annually by July 1. As with the Stafford Student Loan Program, these loans are made by banks, savings and loan associations and credit unions.

Parents who do not have an adverse credit history may borrow from the PLUS program up to the total cost of the student's education, minus aid received by the student.

Federal Stafford Loans

Federal Stafford Loans are available through participating banks and other lenders. The maximum loan amount is $3,500 for first-year students and $4,500 for second-year students. The interest rate is variable and caps at 8.25%. No repayment is required when the student is in school or during grace and deferment periods. Repayment begins six months after graduation or when the student ceases to be enrolled at least half-time.

Middle and higher income students may borrow for education costs in the Federal Unsubsidized Stafford Loan Program. Students may borrow within the loan limits and at the same interest rates as the regular Stafford Loan Program. Students may also borrow both a subsidized and unsubsidized Stafford loan, but the total

may not exceed Stafford loan limits.

With the exception of demonstrating financial need, borrowers must meet all eligibility criteria of the regular Stafford Loan Program. Interest payments must begin immediately after the loan is fully disbursed or may be added to the principal balance. Regular repayment begins six months after the borrower graduates or ceases to be enrolled at least half-time.

Board of Governors Enrollment Fee Waiver - Special Classifications

Students who are recipients of the Congressional Medal of Honor or dependents of an honoree, dependents of victims of the September 11, 2001 terrorist attack, or dependents of deceased law enforcement/fire suppression persons killed in the line of duty are eligible for a Special Classification fee waiver. Students with certification from the California Department of Veterans Affairs or the National Guard Adjutant General are also eligible for a waiver.

Board of Governors Enrollment Fee Waiver - Method A

For this waiver, students must be receiving TANF, SSI, or General Assistance and be legal residents of California. The BOGW application must be completed and a copy of a current monthly check or Untaxed Income Verification form must be submitted. Students are awarded up to $20 a unit per semester, based on enrollment status. This is not a cash award to students but is simply a waiver of enrollment fees. Eligible students are not required to pay health fees.

Board of Governors Enrollment Fee Waiver - Method B

For this waiver, students must meet low income criteria and be legal residents of California. The BOGW application must be completed and a copy of the 2008 IRS 1040 Income Tax Return must be submitted. Students are awarded up to $20 per unit per semester, based on enrollment. This is not a cash award to students, but is simply a waiver of enrollment fees.

Income Criteria Chart - 2009-2010 Academic Year

Number in Household (Including Student)	Family Income 2008 (Adjusted Gross Income or Untaxed Income)
1	$15,315 or less
2	$20,535 or less
3	$25,755 or less
4	$30,975 or less
5	$36,195 or less
6	$41,415 or less
7	$46,635 or less
8	$51,855 or less
+	Add $5,220 for each additional dependent.

You will be asked to provide documentation of income.

Board of Governors Enrollment Fee Waiver - Method C

For this waiver, students must demonstrate financial need and be legal residents of California. Eligibility is based on the completed FAFSA. Students are awarded $20 a unit per semester based on enrollment status. This is not a cash award to students, but is simply a waiver of enrollment fees.

This information is subject to change pending new regulations. Please check with the Financial Aid Office for any changes in eligibility.

Board of Governors Enrollment Fee Waiver - Online Application

Students may complete and submit the Online Application at www.cccapply.org. An **estimated** fee waiver will be awarded based on the information provided on the application. **Students must bring in additional documentation to the Financial Aid Office.** The award will remain in estimated status and the enrollment fee **will not be waived** until the student submits all required documentation.

Scholarships

Valuable scholarships are available to El Camino College students as a result of the many community patrons and organizations which have established awards as a way to express confidence in the college and in its students. Funds associated with these scholarship awards allow students to continue their educational objectives at El Camino College as well as to transfer to other institutions. In addition to the scholarships listed below, the El Camino College Foundation has a scholarship program. Please see page 2 of this catalog for more information.

The El Camino College Scholarship online application opens during the middle of the fall semester and closes at the beginning of the spring semester. During the open period, a student may apply at http://portal.elcamino.edu and click the link titled "Scholarship Application." A simple five-step guide for students is provided on the application homepage. A minimum of six graded units, a minimum cumulative GPA of 2.0, and one letter of recommendation are required to qualify for this program. Further questions may be addressed by calling 310-660-6541 or by visiting the Scholarship Office located in Administration 119.

The college scholarship program gratefully acknowledges the continuing support of the following individuals, groups and memorial scholarship endowments:

- Alpha Gamma Sigma Matt Cook Scholarship
- Alpha Gamma Sigma Ed Martinez
- Alpha Gamma Sigma Dave Schlesinger
- American Association of University Women - Manhattan Beach Branch
- Robert H. Anderson Memorial Scholarship
- Art Department Scholarship
- Associated Students Scholarship
- Howard M. Banks Scholarship
- Margaret Brandt Nursing Scholarship
- Clarence Brown Memorial Scholarship
- Grace Elizabeth Karman Brown Scholarship
- California Association of Realtors
- Paula Carabelli Scholarship
- Mary Ann Collins Art Scholarship
- Corona Del Camino Scholarship
- Datatel Scholars Foundation
- Dollars for Scholars
- Frank Ego Memorial Scholarship
- El Camino College Alumni
- Henny & Rudolf Engelbarts Memorial Scholarship
- Lara Escobar Memorial Fund

- ❑ Stephen Fainsbert Real Estate Memorial Scholarship
- ❑ Frank Fowler Memorial Scholarship
- ❑ Robert Haag Music Scholarship
- ❑ Dean Hale Scholarship
- ❑ Jane Skinner Hardester Annual Music Scholarship
- ❑ Hands of Friendship Scholarship
- ❑ Hata Education Fund
- ❑ Honeywell E&S Scholarship
- ❑ Donald Jones Memorial Scholarship
- ❑ Robert D. Keitel Memorial Scholarship
- ❑ Rudy Kroon Memorial Award
- ❑ Lapidary, Jewelry, Metalcraft and Earth Science Scholarship
- ❑ Bill Leake Scholarship
- ❑ Los Angeles Times
- ❑ Harry P. McCandless Scholarship
- ❑ Mildred C. McCord Memorial Scholarship
- ❑ Robert G. McKinnon Memorial Scholarship
- ❑ Lois Maki Memorial Scholarship
- ❑ Henry Mansfield Scholarship
- ❑ Marcoux Family Award
- ❑ Marina District 18, California Federation of Women's Clubs
- ❑ Dr. Carl S. Meadows Memorial Scholarship
- ❑ John Medina Scholarship
- ❑ Julius Sumner Miller Foundation
- ❑ Mu Phi Epsilon Scholarship
- ❑ Eva M. Murdock Memorial Scholarship
- ❑ Chief Junius Murray "RED" Memorial Firefighters Scholarship
- ❑ Music Scholarship
- ❑ Joe Boyd Noble Memorial Scholarship
- ❑ Lila North Memorial Scholarship
- ❑ Northrop Grumman Corporation
- ❑ Dr. Elizabeth Oberstein Memorial Scholarship
- ❑ Dr. Edward D. Ortell Astronomy Scholarship
- ❑ The Pelland Scholarship
- ❑ Carmen Perry Memorial Scholarship
- ❑ Marilyn T. Poke Scholarship
- ❑ Project Success
- ❑ Puente Project
- ❑ Roadium Open Market
- ❑ Rotary Club of Torrance Scholarship
- ❑ Milton Rudee Memorial Scholarship
- ❑ James F. Schwartz Athlete of the Year
- ❑ Eva Simmons Memorial Scholarship
- ❑ Horace Simmons Memorial Scholarship
- ❑ Merl Sloan Memorial Scholarship
- ❑ Eric Smith Scholarship
- ❑ SOL/Cypress Hill Scholarship
- ❑ South Bay Youth Orchestra
- ❑ South Bay Quilters Guild
- ❑ Jessie Steensma Endowment to El Camino College
- ❑ Les Thomas Memorial Scholarship
- ❑ Chuck Turner Theatre Scholarship
- ❑ The Lyle Tussing International Student Fund
- ❑ Verizon Scholarship
- ❑ Norm Verry Athletic Scholarship
- ❑ Wednesday Progressive Club Scholarship
- ❑ Stanley Wilson Awards for Excellence
- ❑ Maude Withers Memorial Nursing Scholarship
- ❑ Dr. Harold R. Wolpert Scholarship

Standards of Student Conduct

Board Policy 5138

I. Standards of Conduct

A. General Policy

Conduct at El Camino College must conform to the laws of the State of California, District Policies, and campus rules and regulations. The El Camino College faculty, staff and administration are dedicated to maintaining an optimal learning environment; the standards of behavior as outlined in this policy are essential to the maintenance of a quality college environment. These standards will apply to all students on campus, other college property or while attending any college-sponsored event. Violation of such laws, policies, rules and regulations or behavior adversely affecting suitability as a student, will lead to disciplinary action. Disciplinary actions as noted in Section II, may be taken against any person who engaged in behavior defined as misconduct as listed in Section B.

B. Misconduct

1. Dishonesty, including but not limited to cheating, plagiarism or knowingly furnishing false information to the College.
2. Forgery, alteration, or misuse of college documents, records, or identification.
3. Violation of college policies or off-campus regulations, including but not limited to campus regulations concerning student organizations, the use of college facilities, or time, place, and manner of public expression.
4. Possession or use of alcoholic beverage on college property or at any college-sponsored event except where allowed as noted in Section 25608 of the Business and Professions Code.
5. Possession or use of any weapon, firearm or explosives.
6. The use, sale, or possession on campus of or presence on campus under the influence of any controlled substance, or any poison classified as such by Schedule D in Section 4160 of the Business and Professions Code.
7. Continued disruptive behavior, continued willful disobedience, profanity or vulgarity, or continued defiance of the authority of or abuse or, college personnel or to anyone on campus.
8. Willful misconduct which results in injury or death to a student or college personnel.
9. Assault, battery, sex crimes including sexual assault or rape, or any threat of force or violence upon a student or college personnel.
10. Sexual harassment which includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature.
11. Participation in hazing or commitment of any act that tends to injure, degrade or disgrace a student or college personnel.
12. Obstruction or disruption of teaching, research, administration, disciplinary proceedings, or other authorized college activities including but not limited to its community service functions or to authorized activities held off campus. Obstruction or disruption includes but is not limited to the use of skateboards, bicycles, radios, and roller skates.

13. Unauthorized entry to or use of college facilities, equipment or supplies.

14. Theft or deliberate damage to property of a college staff member, a student, or a visitor to the college including but not limited to the Library, Bookstore, and Food Service areas.

15. Defacing or damaging any college real or personal property.

16. Failure to comply with the directions of a member of the college certificated personnel, college management or supervisor personnel, or campus police acting within the scope of his or her duties.

17. Smoking in any area where prohibited by law or by regulation of the Governing Board.

18. The commission of any act constituting a crime under California law, on the campus or at a college-sponsored event.

19. Persistent, serious misconduct not listed in Items 1-18 above.

II. Disciplinary Action

Disciplinary action appropriate to the misconduct as defined above may be taken by an instructor (see Items II, B-1 and 5 below), the Dean of Student Services or his or her designee (see Items II, B-1, 2, 3, 4, 6 and 7 below), and the Board of Trustees (see Item II B-8 below).

A. Notify Campus Police

Misconduct as noted in Section I, B Subsections 4, 5, 6, 7, 8, 9, 13, 14, 15 and 18 above should be brought to the immediate attention of the Campus Police, or local police department/security force for courses taught off campus. This does not preclude a staff member from calling Campus Police for any other misconduct that warrants such action. Campus Police are to be called immediately and a police report will be written with notices to the Dean of Student Services.

B. Discipline

The following types of disciplinary action may be taken or pursued by the college.

1. Warning - A verbal or written notice, given to the student by a faculty member, the Dean of Student Services or any college manager that continuation or repetition of the specified conduct may be cause for other disciplinary action.

2. Reprimand - A written reprimand for violation of specified regulations sent to the student by the Dean of Student Services, noting that continued violations may result in further disciplinary action. The Dean of Student Services shall place a copy of this reprimand in the student file.

3. Restitution - A letter from the Dean of Student Services requesting reimbursement for damage or misappropriation of property will be sent to the student. A copy of this letter will be sent to the student file and the Vice President of Student and Community Advancement. Reimbursement may take the form of appropriate service to repair or otherwise compensate for the damage.

4. Disciplinary Probation - Exclusion from college activities or services set forth in the notice of disciplinary probation. It may include one or both of the following and may be imposed upon an individual or groups of students.

a. Removal from any or all college organization offices.

b. Denial of privileges or participation in any or all college or student-sponsored activities or services. Disciplinary probation may be imposed for a period not to exceed one year. Repetition of conduct resulting in disciplinary probation may be cause for suspension or further disciplinary action. A written statement from the Dean of Student Services will state those activities from which the student will be excluded. A copy of the disciplinary probation letter will be sent to the student file, the Vice President of Student and Community Advancement, and Campus Police.

5. Removal by Instructor - In addition to an instructor's right to drop a student permanently from a class when the student is no longer participating i.e. lack of attendance in the course, an instructor may remove (suspend) a student from his or her class for the day of the incident and the next class meeting. During this period of removal, a conference should be held with the instructor and the student to attempt to resolve the situation that lead to the student's removal and the student shall not be returned to the class from which he or she was removed without the concurrence of the instructor of the class.

a. If a student is suspended for one class meeting, no additional formal disciplinary procedures are necessary.

b. If a student is suspended from class for the day of the incident and the next class meeting, the instructor shall send a written report of the action to his or her dean who shall forward this information to the Dean of Student Services, the Vice President of Student and Community Advancement, and the President. If the student removed by an instructor is a minor, the President's designee (Dean of Student Services) shall ask a parent or guardian of the student to attend a parent conference regarding the removal as soon as possible. If the instructor or the parent or guardian so requests, a college administrator shall attend the conference.

c. The instructor may recommend to his or her dean that a student be suspended for longer than two class meetings. If the dean, instructor and student cannot resolve the problem, the suspension will be referred to the President or the President's designee (Dean of Student Services) for possible actions described in Section 6 of this item.

d. During the period following the initial suspension from class for the day of the incident and the following class meeting, the student shall be allowed to return to the class until due process and the disciplinary procedures are completed unless the student is further suspended as a result of actions taken as defined in Section 6 of this item.

6. Suspension - The President or the President's designee (Dean of Student Services) may suspend a student as follows:

a. From one or more classes for a period of up to ten days of instruction; or

b. From one or more classes for the remainder of the term; or

c. From one or more classes and activities of the community college for one or more terms. The Dean of Student Services shall send the notice of suspension to the student, the student file, the Vice President of Student and Community Advancement, the President of the College and the Campus Police. Whenever a minor is suspended from the College, the parent or guardian shall be notified in writing by the President or the President's designee (Dean of Student Services).

7. Immediate Suspension - Any College Manager, or delegated authority during non-school hours, may immediately suspend a student from the campus in an emergency action to protect lives or property and to insure the maintenance of order. Within twenty-four (24) hours or the next regular work day of the suspension, the manager shall send the Dean of Student Services a written report of the suspension. The Dean of Student Services shall send a written notice to the suspended student, informing the student of his or her right to a hearing within ten (10) days of the suspension. A copy of this notice will be sent to the student file, the Vice President of Student and Community Advancement, the President, and Campus Police.

Immediate suspension will be enforced for the following types of student misconduct:

- Possession or use of any weapon, firearms or explosives.
- Willful misconduct which results in injury or death to a student or college personnel, and
- Assault, battery, sex crimes including sexual assault or rape.

When there is probable cause to believe that a student has committed any of the above actions, that student will be immediately suspended from the campus by any college manager during school hours, or delegated authority during non-school hours. Within 24 hours of, or the next regular work day after the suspension, the

manager shall send the Dean of Student Services a written report of the suspension. The Dean of Student Services will then send a written notice to the suspended student, informing the student that he or she has been suspended for the remainder of the semester at a minimum and that he or she has the right to a hearing within ten days of the suspension.

8. Expulsion - Expulsion is the termination of student status for an indefinite period of time. The Board of Trustees is authorized to expel a student for good cause when other means of correction fail to bring about proper conduct, or when the presence of the student causes a continuing danger to the physical safety of the student or others. The notice of expulsion will be sent to the student with copies to the student file, the Dean of Student Services, the Vice President of Student and Community Advancement, the President and Campus Police. The expulsion of a student shall be accompanied by a hearing if requested by the student.

Cheating or Plagiarism

Cheating violates Section I.B.1 of El Camino College's Board Policy 5138, Standards of Student Conduct.

The El Camino College faculty, staff and administrators are dedicated to maintaining an optimal learning environment and will not tolerate academic dishonesty. To uphold the academic integrity of the institution, all members of the academic community, faculty and students alike, must assume responsibility for providing an educational environment of the highest standards characterized by a spirit of academic honesty. The following statement is part of Board Policy 5138, Standards of Conduct: "Dishonesty, including but not limited to cheating, plagiarism or knowingly furnishing false information to the college." When there is evidence of cheating or plagiarism in classroom work, students may receive an F for that piece of work or may be suspended from all classes for that term and the following term if deemed appropriate.

Examples of Cheating or Plagiarism are:

Representing the words, ideas or work of another as one's own in any academic exercise (plagiarism), including the use of commercial term paper companies;

Copying or allowing another student to copy from one's paper or answer sheet during an examination;

Allowing another individual to assume one's identity for the purpose of enhancing one's grade in any of the following: testing, field trips or attendance;

Falsifying or attempting to falsify attendance records and/or grade rosters;

Changing answers on a previously scored test, assignment or experiment with the intent to defraud;

Inventing data for the purpose of completing a laboratory experiment or case study analysis with the intent to defraud;

Giving and/or taking information during an examination by any means such as sign language, hand signals or secret codes;

Obtaining copies of notes, exams or exam questions by any means other than distribution from the instructor. (This includes copying and removing exam questions from the classroom for any purpose.);

Using study aids such as calculators, tape recorders or notes that have been specifically prohibited by the instructor.

Responsibility of El Camino College Students

It is the responsibility of each student to conduct him/herself in a manner which encourages learning and promotes honesty; and to act with fairness toward other students in the classroom. This incorporates the notion that students should not seek an unfair advantage over other students when completing an assignment, taking an examination or engaging in any other kind of academic activity.

Consequences for Cheating or Plagiarism

Given alleged violation of the Standards of Conduct, any or all of the following actions may be imposed:

1. The instructor may assign a failing grade to the examination or assignment in which the alleged cheating or plagiarism occurred. This action is based on information that the instructor had.

2. The instructor may dismiss the student from the class or activity for the present and/or following class session(s) as stipulated in BP5138, section IIB5: Removal by Instructor.

3. The instructor may recommend suspension or expulsion of the student from the college as stipulated in BP5138, Section IIB6 and 8. This recommendation must be in accordance with El Camino College's Due Process and Disciplinary Procedures.

4. Complete the Academic Dishonesty Report Form and submit it to your Division Office for distribution.

Due Process Disciplinary Procedures

A. LODGING OF CHARGES

1. Charges of misconduct against a student, as defined in Section I.B. 1 through 19 of Board Policy 5138, may be lodged by any person who has personal knowledge of facts indicating that the student participated in the alleged misconduct. Such a witness shall hereinafter be referred to as the "complainant" and the person being charged as the "accused."

2. The complainant must first lodge his or her charge(s) with a responsible manager at the level of director or above.

3. The responsible manager will review the charge(s). The manager will then either:

a. attempt to informally resolve the issue(s) or

b. recommend disciplinary action.

4. If the responsible manager recommends disciplinary action, he or she will forward the charge(s) to the Director of Student Development. The Director of Student Development shall review the charge(s) and make an independent determination as to whether or not the conduct charged amounts to misconduct as defined in Item I.B 1 through 19 of Board Policy 5138 and whether disciplinary action should be brought against the accused.

5. If disciplinary action is appropriate, the Director of Student Development or appropriate administrator shall give the accused a written notice of the lodging of charges, the specified acts of misconduct and the proposed disciplinary action. The accused will be notified of his or her right to request a hearing within five (5) working days. A copy of this policy will be included with the notice. If the student does not request a hearing, the proposed disciplinary action will be taken.

B. HEARING OF CHARGES

1. Scheduling of Hearing

a. Students who are placed on immediate suspension - If the student has been suspended prior to a hearing, the hearing shall be commenced within ten (10) days of the ordered suspension.

b. Students who have not been placed on immediate suspension:

(1) The accused shall receive written notice of the charge(s) giving rise to the proposed disciplinary action.

(2) The accused has five (5) working days after receipt of written notice of the charge(s) to request a hearing before the Disciplinary Hearing Committee. Failure to request such a hearing in writing within this five day period, or failure to appear at such hearing will constitute a waiver of his or her right to a hearing pursuant to these procedures.

Unless the hearing may result in expulsion, the accused is not entitled to representation by counsel. If the accused wishes to be represented by counsel at an expulsion hearing, the accused shall provide written notice in the request for hearing of the intention to be represented. If the accused is a minor, he or she shall be entitled to be accompanied by his or her parent or guardian at any hearing before the Disciplinary Hearing Committee.

(3) The Disciplinary Hearing Committee shall be chaired by the Dean of Student Services who will serve as the hearing officer and have as members one representative from each of the following

groups: the Academic Senate, the Classified Employees, the Student Senate, and College Management.

(4) If the accused requests a hearing, the Director of Student Development shall schedule a disciplinary hearing to take place within five (5) working days of the receipt by him or her of the written request for a hearing.

(5) The Director of Student Development shall give the accused and members of the Disciplinary Hearing Committee written notice of the time, place and date set for the hearing.

(6) If the accused does not request a hearing, the Dean of Student Services may finalize the disciplinary action with the exception of expulsion, which must be recommended to the Vice President of Student and Community Advancement. If the Vice President determines that expulsion is appropriate, he or she will recommend expulsion to the Board of Trustees for final approval.

2. How Hearing Is To be Conducted

a. The public shall be excluded from this hearing.

b. The hearing officer may conduct the hearing in any manner he or she deems appropriate, provided the accused is given the opportunity to confront the witnesses testifying against him or her and to offer the statements of any supporting witnesses.

c. If the Disciplinary Hearing Committee finds adequate support for the charge(s), it shall take appropriate disciplinary action pursuant to Board Policy 5138, Section II. B.

d. When the Disciplinary Hearing Committee reaches a decision, the accused shall be given written notice of the decision, the disciplinary action, if any, to be taken, and the right to appeal the decision to the Vice President of Student and Community Advancement.

C. REVIEW BY THE VICE PRESIDENT OF STUDENT SERVICES

1. The accused may seek review of the decision of the Disciplinary Hearing Committee by delivering to the Vice President of Student and Community Advancement, no later than five (5) working days after notice to the accused of the Disciplinary Hearing Committee's decision, a signed statement containing:

a. A statement that the accused appeals the decision; and

b. A brief statement of why the accused considers the decision to be in error.

2. The Vice President of Student and Community Advancement shall examine all documents received and shall grant review of the matter only if he or she determines from these documents that the decision of the Disciplinary Hearing Committee was in error or the sanctions imposed were excessive in light of the seriousness of the charge(s).

3. If the Vice President of Student and Community Advancement determines that review is not appropriate, he or she shall, within five (5) working days after receipt of the accused's request for review, send written notice to the accused denying review and affirming the decision of the Disciplinary Hearing Committee.

4. If the Vice President of Student and Community Advancement determines that review is appropriate, he or she shall, within five (5) working days after receipt of the request for review, schedule a meeting giving the accused at least three (3) working days written notice thereof with the accused and the hearing officer, at which time the accused will be allowed to present his or her objections to the Disciplinary Hearing Committee's decision, and the hearing officer will be allowed to respond thereto.

5. After such a meeting, the Vice President of Student and Community Advancement may reverse, revise or modify the decision and the disciplinary sanctions therein imposed on the accused, or the Vice President may let the decision and disciplinary sanctions stand.

D. GENERAL PROVISIONS

1. If students or other persons are suspended or expelled from the campus, they shall not appear on the campus without permission from the Vice President of Student and Community Advancement and must have a Campus Police escort.

2. The time limits specified in the Due Process and Disciplinary Procedures may be shortened or extended if there is a mutual written concurrence between the parties.

3. Failure of the accused to appeal any determination at any step to another step within the specified time limits shall be deemed acceptance by the accused of the last determination rendered.

4. Written notice to an accused pursuant to these procedures shall be sufficient if sent by first class mail to the last known address of the accused currently on file with the college. Notice shall be deemed given on the day of said mailing. Notice shall be in the English language.

5. In the absence of the Director of Student Development, a designee may be appointed by the Vice President of Student and Community Advancement.

6. No student shall be removed, suspended or expelled unless the conduct for which the student is disciplined is related to college activity or college attendance. In addition, no student may be removed, suspended, or expelled for parking violations.

7. The President or the President's designee (Campus Police) shall, upon the suspension or expulsion of any student, notify the appropriate law enforcement authorities of Los Angeles County or the City of Torrance of any acts of the student which may be in violation of Section 245 of the California Penal Code - Assault with a deadly weapon or force likely to produce great bodily injury.

Student Grievance

Board Policy 5310

I. PURPOSE AND DEFINITION

The purpose of this policy is to provide a due process procedure for review and resolution of student grievances. A grievance is defined as a student's claim that his or her legal rights, status, or privileges as a student have been adversely affected by a College decision or action. This includes but is not limited to filing a discrimination complaint on the basis of race, religious creed, color, national origin, ancestry, handicap, sex, or services as a Vietnam era veteran.

This policy does not apply to student disciplinary matters which are subject to Policy 5138 or to student grades.

II. INFORMAL RESOLUTION

In an attempt to resolve a complaint informally, the student shall first request a meeting to discuss it with the Dean, Associate Dean or Director (hereinafter Administrator) of the division in which the matter in question resides. Upon such a request, the Administrator shall inform and confer with any staff members named by the student. In turn, the Administrator shall schedule a meeting with the student and if requested all involved parties, not more than ten (10) school days from the date of request.

III. FORMAL RESOLUTION

Any complaint that is not resolved by the Informal Procedure as set forth in Section II and which constitutes a grievance as defined in Section I, may be processed by the student as follows:

A. STEP ONE

The student shall submit his or her written grievance, on a form provided by the College, to the appropriate Administrator. In order to be considered valid, the written grievance must be submitted within thirty (30) school days after the student knew or should have known of the facts giving rise to the grievance. The grievance shall fully state the facts surrounding the grievance and the remedy sought by the student. The grievance shall be signed and dated by the student and shall incorporate a statement that the student had first followed the provisions of Section II.

Upon receipt of the written grievance, the Administrator shall (a) promptly forward one copy to the Director of Student Development and (b) schedule a meeting with the student to review and discuss the grievance. The student will be allowed to have any witnesses and a non-legal support person with him or her. Staff mem-

bers named by the student shall be asked to attend this meeting and will be allowed to have a non-legal co-worker with them. Neither the student's nor the staff member's support person will participate in the meeting.

Such meetings shall be scheduled to take place no later than the fifth (5th) school day from the date the written grievance is received. By the end of the fifth school day following the date of the meeting, the Administrator shall provide the student and staff member(s) with a written decision. The written decision will terminate Step One.

B. STEP TWO

1. If the grievance is not satisfactorily resolved at Step One, the student may seek review of the decision of the Administrator by the Director of Student Development. The student shall provide the Director of Student Development with: (a) a copy of the written grievance, (b) a copy of the Step One decision, (c) a written request to appeal the Step One decision, and (d) a brief statement justifying the appeal. The written appeal must be filed with the Director of Student Development no later than the end of the fifth (5) school day after the decision in Step One has been issued.

2. Within five school days after receipt of the student's written appeal, the Director of Student Development shall meet with the student. The Director of Student Development may schedule a meeting with the participants as allowed in Step 1 after meeting with the student.

3. A written decision on the grievance appeal shall be transmitted to the student and staff members by the Director of Student Development by the end of the fifth school day following the appeal meeting. Transmittal of the written decision will terminate Step Two.

C. STEP THREE

1. If the grievance is not resolved at Step Two, the student may submit a written request for a final appeal to the Vice President of Student and Community Advancement. The student's written request shall be submitted to the Director of Student Development who will forward it to the Vice President.

2. The Vice President of Student and Community Advancement will forward the request to the Superintendent-President's Cabinet and attach a copy of the grievance, the Director of Student Development's decision, and a copy of the grievant's request to appeal to Step Three.

3. The Superintendent-President's Cabinet shall review the written record within ten (10) work days of receipt of the appeal to Step Three. Upon conclusion of this review, the Superintendent-President shall render a written decision to the student grievant with a copy to the Dean of Student Services. The decision of the Superintendent-President shall be final.

IV. GENERAL PROVISIONS

A. The time limits specified in this policy may be shortened or extended if there is mutual written concurrence between the parties.

B. As used in these procedures, "student" includes a person who has filed an application for admission to the College. A grievance by an applicant for admission shall be limited to a complaint regarding denial of admission.

C. At any step of the grievance procedure, the College may designate a substitute for the designated college officials. Additional management representatives may be designated by the College to be present at either Step One or Step Two meetings.

D. Failure of the student grievant to appeal a grievance determination at any step to another step within the specified time limits shall be deemed acceptance of the last determination rendered.

E. The grievant may appeal to the next step if a favorable decision was made but the necessary steps to implement the decision were not fulfilled.

F. It is the intent of this policy that the confidentiality of the discussions, including any documents or written records, be maintained by the participants.

G. It will not be mandatory for any staff member to attend the student grievance meetings nor will the student grievance procedure supersede staff member's contractual rights.

Reporting of Crimes

Board Policy 3515

The Superintendent/President shall assure that, as required by law, reports are prepared of all occurrences reported to Campus Police and arrests for crimes committed on campus that involve violence, hate violence, theft or destruction of property, illegal drugs, or alcohol intoxication. The Superintendent/President shall further assure that required reports of non-criminal acts of hate violence are prepared. Such reports shall be made available as required by State and Federal law.

Student Right to Know

In accordance with the Crime Awareness and Campus Security Act of 1990 which is Title II of Public Law 101-542, the Student Right to Know and Campus Security Act, as amended by PL 102-26, the Higher Education Technical Amendments of 1991, El Camino College will collect as of August 1, 1991, and distribute annually commencing September 1, 1992, the information required by this legislation.

The security report will include data on arrests and crimes committed on campus or at campus-sponsored events. In addition, other information related to reporting crimes or suspicious behavior; describing campus security and crime prevention programs and materials; and the College's substance abuse education program will be included for distribution.

These materials will be distributed annually to all employees and students, and be available upon request to applicants for enrollment or employment.

Federal Regulations

In accordance with the federal Student Right to Know Act of 1990, El Camino College collects and reports statistics regarding instances of criminal activity on campus. This report, available on the college web site (www.elcamino.edu/police/), reports data on violent crime, burglary and motor vehicle theft, as well as a summary of arrests and disciplinary referrals for substance abuse and weapons violations. A booklet is available from the Campus Police Department detailing arrests, crimes, suspicious behavior and campus security and crime prevention programs and materials.

The Student Right to Know regulations also require colleges to annually publish completion and transfer rates. That report is available on the college web site (http://elcamino.edu/student). During the 2003-2004 academic year, 288 students transferred to the University of California system and 922 transferred to the California State University system. During the fall semester 2003, El Camino College students completed 80% of all courses attempted.

Sexual Assaults on Campus or at Campus-Sponsored Events

The Board of Trustees and the employees of El Camino College are committed to maintaining a safe campus. Accordingly, the college has policies and procedures regarding sexual assaults on campus or at a college-sponsored event. Should an assailant be a student or staff member, the appropriate due process procedures as set forth in Board Policy 5138, Standards of Student Conduct/Due Process and Education Code Sections 87405 and 87334-87336 and appropriate sections of the respective union contracts are enforced.

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Academic Affairs

Deans, Directors, and Academic Offices

El Camino College's instructional courses and programs are organized and administered through academic divisions and academic offices under the direction of the Vice President of Academic Affairs. The Academic Affairs Office is located on the first floor of the Administration Building, room 116. Division offices normally are open from 7:45 a.m. to 4:30 p.m., Monday through Friday.

Students may review the Student Learning Outcomes (SLOs) for all El Camino College Courses at www.elcamino.edu/academics/slo.

Behavioral and Social Sciences

Dr. Gloria E. Miranda, Dean
Office - Social Science Building, Room 101 310-660-3735

The Division of Behavioral and Social Sciences offers instruction in American studies, anthropology, child education, economics, education, global studies, history, human development, philosophy, political science, psychology, sociology, and women's studies.

These courses are designed to provide students with the opportunity to examine and gain an understanding in these areas:

1. Political, social, and economic aspects of past and present cultures in preparation for the future;
2. Human values, ethical outlooks, moral standards and their importance in the development of personal worth, obligations and responsibilities; and
3. Psychological and social forces which shape human behavior and the impact of such forces on all facets of culture.

Business

Dr. Virginia L. Rapp, Dean
Office - Business Building, Room 107 310-660-3770

The Division of Business offers courses in accounting, computer information systems, finance, marketing, management, office administration, supervision, real estate, paralegal studies and law.

In these fields, curricula emphasize both theoretical and practical training and prepare the student to meet lower division requirements for transfer to four-year institutions or to enter directly into employment.

Fine Arts

Dr. James F. Schwartz, Interim Dean
Office - Music Building, Room 101 310-660-3715

The Division of Fine Arts includes art, dance, film/video, music, photography, speech communication, and theatre. The courses are designed to enlarge the cultural life of the student, the school, and the community. In addition, art exhibits, theatre productions, musical theatre productions, choral and instrumental concerts, recitals, speeches, debates, and special workshops are offered as a means of providing opportunities for development of the talents of interpretive and creative expression.

The Fine Arts Division offers a variety of performances by nationally and internationally acclaimed artists through El Camino College's Center for the Arts. Fine Arts students participate by attendance at certain performances and residency workshops offered by many of these artists.

Health Sciences and Athletics

Dr. Irvin Drew, Interim Dean
Office - Behavioral Sciences Building first floor, Art 101 310-660-3545
Dr. Kim Baily, Interim Director of Nursing
Office - Technical Arts Building, TA 101B 310-660-3281
Ms. Dipte Patel, Director, Special Resource Center Office - Student Services Center, East Wing 310-660-3295

The Division of Health Sciences and Athletics offers education and training programs in the health sciences, kinesiology, co-educational physical education activities, adapted physical education, recreation, basic first aid, CPR, men's and women's athletics, educational development, and sign language/interpreter training.

Within the division, the kinesiology department provides extensive offerings in exercise science as well as a variety of lifetime and fitness activities including golf, aquatics, strength training, racquet sports, combatives, and aerobic programs. The exercise science program promotes health care through a wellness approach using extensive individualized assessments. The curriculum includes courses that prepare students for athletic training, personal trainer certification, senior fitness programs for successful aging, and for fitness and sports nutrition. The adaptive exercise program serves students who have a wide range of disabilities including spinal cord injuries, head traumas, MS, CP, and lung disease. Successful completion of the first aid courses will lead to Red Cross certification in first aid, CPR, and basic life support. Basic water safety instruction and lifeguard training courses are also available and may lead to Red Cross certification. The division provides opportunities for intercollegiate athletic competition in eleven men's and ten women's sports.

The health sciences programs include health education, exercise science, nursing, radiological technology, and respiratory care. Health education provides a survey of contemporary health issues designed to familiarize students with sound approaches to good health. The exercise science program promotes preventive health care through a wellness approach using extensive individual assessments leading to personalized interventions and program development. The registered nursing program includes requirements for the Associate in Science degree and prepares students to take the National Licensing Examination. The radiological technology (medical x-ray) program is an allied health specialty designed to provide courses which will prepare the student to function as a skilled radiological technologist. The respiratory care program is designed to provide the respiratory care science and clinical courses needed to prepare the student to function as a skilled respiratory therapist.

The Special Resource Center provides support services and auxiliary aids for students with disabilities.

Humanities

Mr. Thomas K. Lew, Dean
Office - Humanities Building, Room 322
310-660-3316
Dr. Barbara Jaffe, Associate Dean
Office - Humanities Building, Room 322

The Division of Humanities offers students the opportunity to engage in skills-building and liberal arts courses to further their educational goals. Through courses in academic strategies and library information science, students learn the skills they need to succeed in college courses. English as a Second Language courses provide proficiency in English, and developmental reading and writing classes assist students who need additional skills before entering college-level courses.

The division offers a wide variety of foreign language courses, including Chinese, French, German, Italian, Japanese, and Spanish. Journalism classes emphasize writing of news and feature stories, culminating in the weekly publication of the school newspaper. Once a year, a magazine production class publishes Warrior Life. Instruction in composition ranges from basic to advanced, and creative writing courses provide training for and support of poets and fiction writers. The literature courses broaden students' understanding and appreciation of writers and their texts throughout the ages. The division annually produces Myriad, a student literary journal, as well as Our Voices, a student developmental writing journal.

Industry and Technology

Dr. Stephanie Rodriguez, Dean
Office - Technical Arts Building, first floor, TA 102
310-660-3600
Dr. Thomas Jackson, Associate Dean
Office - Technical Arts Building, second floor, TA 207

The division offers courses that provide marketable skills by obtaining a certificate or an associate degree in these program areas: air conditioning and refrigeration, architecture, administration of justice, automotive collision repair/painting, automotive technology, computer aided design/drafting, construction technology, cosmetology, electronics and computer hardware technology, environmental technology, family and consumer studies, fashion, fire and emergency technology, machine tool technology, manufacturing technology, paramedical technician, quality assurance, and welding. The division also offers courses in culinary arts, engineering technology, and nutrition and foods.

Learning Resources

Ms. Alice Grigsby, Director
Office - Library, Room 110
310-660-3525

Learning Resources offers a wide range of support programs and services to sustain and complement the teaching-learning programs of El Camino College. Current resources and well-equipped facilities are made available to both students and faculty. Services are provided by library services, the Learning Resources Center, open access computer labs, tutorial services, and video and audio-visual communication services. Programs include Distance Education that offers accredited college courses via television and computer.

Mathematical Sciences

Dr. Donald Y. Goldberg, Dean
Office - Math and Computer Science Building, Room 101
310-660-3200

The Division of Mathematical Sciences offers instruction to students in mathematics, engineering, and computer science. Mathematics courses include basic skills development, general education for students seeking university transfer, and specialized courses for future teachers. Full two-year programs for mathematics, computer science, and engineering majors are offered. The computer science program includes language courses in Java, C++, C#, and Fortran. The division faculty is proud of its distinguished reputation for rigorous preparation of future scholars, scientists, engineers, and others who will employ mathematics.

The division is dedicated to promoting student success at all levels. The Mathematics Study Center and the Math-Science Multimedia Computer Lab provide places for group study, one-to-one tutoring, and computer-assisted learning on a drop-in basis. Many mathematics courses provide students the opportunity to use computational technology, such as graphing calculators, *Mathematica*, and MINITAB.

Natural Sciences

Dr. Jean Shankweiler, Dean
Office - Life Science Building, Room 101
310-660-3343

The Division of Natural Sciences offers instruction in the biological and physical sciences for science and non-science majors. The division is comprised of six areas: astronomy, chemistry, earth sciences, environmental horticulture, life sciences, and physics. Earth sciences courses are offered in geography, geology, and oceanography. Life sciences courses are offered in anatomy, biology, field studies, microbiology, and physiology. The division provides a comprehensive lower division curriculum for science majors preparing to transfer to four-year universities. Also provided are general education courses that are designed to allow students to understand and apply the scientific method and to understand basic underlying principles of nature and the relevance to their lives.

The division maintains a planetarium and observatory with several telescopes for its instructional program in astronomy and for public outreach. With the Chronos star projector, faculty are able to display a realistic sky of the past, present, and future from different locations in the solar system. There are monthly open houses at the observatory and, when possible, planetarium shows are provided for schools and the public.

Associate Degree

Definition of Associate Degree

The Associate Degree leads students through patterns of learning experiences designed to develop certain capabilities and insights. Among these are the ability to think critically and to communicate clearly and effectively both orally and in writing; to use mathematics; to understand the modes of inquiry of the major disciplines; to be aware of other cultures and times; to achieve insights gained through experience in thinking about ethical problems; to find, evaluate, use, and communicate information in various formats; and to develop the capacity for self-understanding. In addition to these accomplishments, the student shall possess sufficient depth in some field of knowledge to contribute to lifetime interest.

An Associate in Arts degree is granted in a discipline in which behavioral sciences, fine arts, human movement, humanities, public affairs, or social sciences are integral within the academic area.

An Associate in Science degree is granted in a discipline in which scientific thought and investigation are integral within the academic area or where there is emphasis on the application of mathematics, science, or technology.

Philosophy for Associate Degree and General Education

Board Policy 4025

El Camino College recognizes the importance of the individual to the local, state, national, and international communities. The College, through the awarding of an associate degree, strives to create an environment which stimulates greater individual creativity and achievement, personal and social responsibility, as well as ethical and technological awareness. The degree requirements lead students through patterns of learning experiences designed to develop certain capabilities and insights through general education and sufficient depth in a specific field of knowledge.

El Camino College recognizes the need to provide a multidimensional, multicultural, and integrative general education curriculum, as the core of the associate degree. With this objective in mind, El Camino College pledges to develop and maintain a general education curriculum that promotes critical thinking and analytical skills, clear and precise expression, cultural and artistic sensitivity, personal growth, health, and self-understanding. General education curriculum will enhance appreciation and understanding of the scientific method and the relationships between science and other human activities. It will also develop an understanding of methods of inquiry regarding human behavior, foster an appreciation of how societies and social groups operate, and develop awareness of the ways people throughout the ages have responded to themselves and the world around them in artistic and cultural creations.

General Education Criteria for Associate in Arts and Associate in Science Degrees

1. Natural Sciences. Courses in the natural sciences are those which examine the physical universe, its life forms, and its natural phenomena. To satisfy the general education requirement in natural sciences, a course shall be designed to help the student develop an appreciation and understanding of the scientific method and encourage an understanding of the relationships between science and other human activities.

This category would include introductory or integrative courses in astronomy, biology, chemistry, general physical science, geology, meteorology, oceanography, physical geography, physical anthropology, physics, and other scientific disciplines which emphasize experimental methodology, the testing of hypotheses, and the power of systematic questioning, rather than only the recall of facts. Courses which focus on personal, practical, or applied aspects are not suitable for this category.

2. Social and Behavioral Sciences. Courses in the social and behavioral sciences promote an appreciation and understanding of how members of diverse societies operate or have operated as individuals and social groups. To satisfy the general education requirement in social and behavioral sciences, a course shall develop an awareness of methods of inquiry and stimulate critical thinking about the ways in which people act and interact within social and cultural contexts.

This category would include introductory or integrative survey courses such as child development, cultural anthropology, cultural geography, economics, family and consumer studies, history, political science, psychology, sociology, and related disciplines.

3. Humanities. Courses in the humanities are those that promote an appreciation of the cultural activities and artistic expressions of human beings. To satisfy the general education requirement in humanities, a course shall develop the student's awareness of the ways that people throughout the ages have artistically and culturally responded to themselves and the world around them and shall develop the student's aesthetic understanding and ability to make value judgments.

This category would include introductory or integrative courses in the arts, foreign languages, literature, philosophy, and religion.

4. Language and Rationality. Courses in language and rationality are those that develop for the student the principles and applications of language toward logical thought, clear and precise expression, and critical evaluation.

A. English Composition. Courses that fulfill the written composition requirement shall focus primarily on both expository and argumentative writing.

B. Communication and Analytical Thinking. Courses that fulfill the communication and analytical thinking requirement shall include oral communications, written communications, critical reasoning, mathematics, logic, statistics, and computer languages and programming.

5. Health and Physical Education. Courses in health and physical education promote lifelong understanding of the basic human need for development and maintenance of good personal health and fitness. To satisfy the general education requirement in health education, a course shall help the student develop knowledge of personal health through the examination of health-related social problems, potential preventative strategies, and mediating actions. A physical education course shall establish a foundation for regular life-long physical activity and provide opportunities for a student to develop competencies in activities that promote movement, reduce disease risk, and improve overall quality of life.

6. Mathematics Competency. A course designed to satisfy the Mathematics Competency requirement must be at the elementary algebra level or higher and shall expand students' mathematical reasoning skills as they develop mathematical arguments. Courses shall integrate numeric, symbolic, functional, and spatial concepts. Courses shall enable students to apply their knowledge of mathematics to meaningful applications and explorations, to solve mathematical problems, and to judge the reasonableness of their results. Courses that are computational in nature are not suitable for this category.

Graduation

To receive an Associate in Arts or an Associate in Science degree from El Camino College, a student must complete at least 60 units in degree applicable college courses which must include general education requirements and course work in an approved transfer major or associate degree program. Course work toward the degree must be completed with a cumulative grade point average (GPA) of 2.00 or higher. A minimum of 12 of the required 60 degree applicable units must be successfully completed at El Camino College. A notation of "Graduation with Honors" is earned with a cumulative GPA of 3.5 or higher.

Students must file an Intent to Graduate From in the evaluations area located in the Admissions Office by the deadline date published in the schedule of classes.

Evaluation of Completion of Requirements

Students who want to graduate from El Camino College with an Associate in Arts or Associate in Science degree must file an Intent to Graduate form, which is evaluated according to the following conditions:

1. Catalog requirement – Degree requirements are derived from the catalog in effect at the time the student entered El Camino College or from the current catalog, following the Catalog Rights guidelines (described below). Each catalog is in effect during the academic year for which it it was published (fall semester through the summer session).

2. Residency requirement – A minimum of 12 of the required degree applicable units must be successfully completed at El Camino College.

3. Unit requirement – Sixty (60) degree applicable units are required for the associate degree, including appropriate general education and major requirements.

4. General Education requirement - Coursework toward the degree must be completed with a cumulative grade point average (GPA) of 2.0 or higher in work at El Camino College and in work completed at all colleges.

5. English requirement - A minimum grade of "C" in a Freshman Composition course.

6. Mathematics requirement - A minimum grade of "C" in an Intermediate Algebra course.

7. Major requirement - A minimum grade of "C" in all courses toward the major.

Catalog Rights

Board Policy 4100.1

The El Camino College Catalog specifies the general education, major, and unit requirements which the student must satisfy to qualify for an Associate Degree, a Certificate of Achievement, or a Certificate of Accomplishment. Students who have maintained continuous enrollment may choose to graduate under the catalog requirements in effect either 1) at the time they began attending El Camino College continuously or 2) at the time they graduate from El Camino College. For degree and certificate purposes, continuous enrollment is defined as enrolling at El Camino College at least one semester (excluding summer and winter terms) each academic year and receiving a letter grade, a W (Withdrawal), CR/NC (Credit/No Credit), or Pass/No Pass on the transcript.

Double Major

Students may receive a double major upon completion of the major requirements for the second major.

Second Degree

Students may receive both an Associate in Arts and an Associate in Science Degree upon the completion of the specific general education and major requirements for each degree as stated in the catalog.

General Information

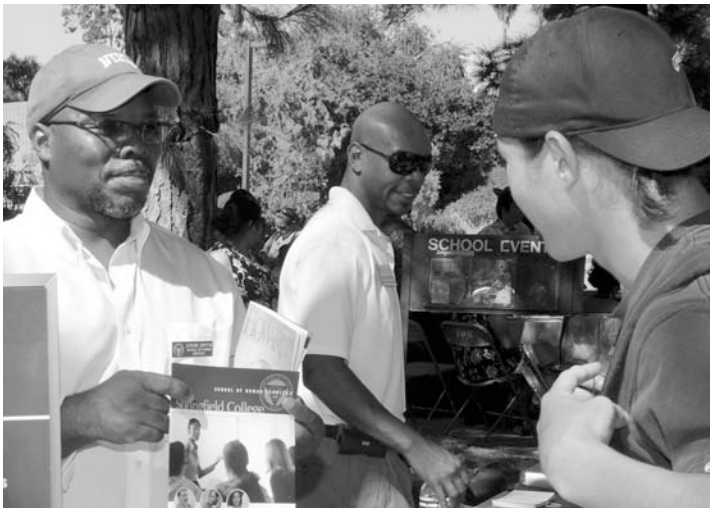
Some courses listed in the associate degree requirements may not transfer to a four-year college or university. Please refer to the course notations listed in the curriculum section of this catalog. All degrees require a total of 60 units with no fewer than 18 units in the major and appropriate general education courses as indicated on the A.A. or A.S. degree patterns that follow.

Associate in Arts Degree and Associate in Science Degree Programs

Associate in Arts Degree

Administration of Justice*
Anthropology
Art
Childhood Education*
Dance
Economics
English
Ethnic Studies
Family and Consumer Studies*
Film/Video*
French
General Studies
History
Japanese
Journalism*
Liberal Studies (Elementary School Teaching)
Music
Paralegal Studies*
Philosophy
Physical Education
Political Science
Psychology
Real Estate*
Recreation
Sign Language/Interpreter Training*
Sociology
Spanish
Speech Communication
Theatre

*Indicates Vocational Program



Associate in Science Degree

Air Conditioning and Refrigeration*
Architecture*
Astronomy
Automotive Collision Repair/Painting*
Automotive Technology*
Biology
Business:
  Accounting*
  Business Administration*
  Business Management*
  Marketing*
  Office Administration*
Chemistry
Computer Aided Design/Drafting*
Computer Information Systems*
Computer Science
Construction Technology*
Cosmetology*
Electronics and Computer Hardware Technology*
Engineering Technology*
  (pending System Office approval)
Environmental Horticulture*
Environmental Technology*
Fashion*
Fire and Emergency Technology*
General Science
Geography
Geology
Industrial Technology
Laboratory Technician (Medical)*
Machine Tool Technology*
Manufacturing Technology*
Mathematics
Nursing*
Photography*
Physical Science
Physics
Pre-Dentistry
Pre-Engineering
Pre-Medicine
Pre-Nursing
Pre-Optometry
Pre-Pharmacy
Quality Assurance*
Radiologic Technology*
Respiratory Care*
Welding*

*Indicates Vocational Program

Associate in Arts Degree

A. A. Degree Requirements

Refer to Page 33 for general requirements. Complete requirements specified under Section A, Section B, and Section C.

Section A - General Education Requirements

A student has three options to complete the General Education Requirements.

OPTION I is designed for students completing the El Camino College major.

OPTION II is designed for students completing CSU GE Breadth transfer requirements.

OPTION III is designed for students completing CSU/UC (IGETC) transfer requirements.

OPTION I: EL CAMINO COLLEGE REQUIREMENTS

Complete the specified number of units in categories 1 through 5 and the mathematics competency requirement in category 6.

1. NATURAL SCIENCES: minimum of 3 semester units
Anatomy 30, 32
Anatomy and Physiology 34A, 34B
Anthropology 1
Astronomy 20, 25
Biology 8, 10, 11, 12, 15, 16, 17, 101, 102
Chemistry 1A, 4, 20, 21A
Geography 1, 9
Geology 1, 2, 6, 15
Microbiology 33
Oceanography 10
Physical Science 25
Physics 1A, 2A, 3A, 11
Physiology 31

2. SOCIAL AND BEHAVIORAL SCIENCE: minimum of 9 semester units
One course from A, one course from B, and one course from C:
A. American Studies 1, 3, 7
History 1A, 1B, 8, 9, 16A, 16B, 17, 18A, 18B, 32
Women's Studies 1
B. Political Science 1, 5, 6, 8
C. Anthropology 2, 3, 4, 6, 8, 10
Business 17, 22
Child Development 3, 9
Economics 1, 2, 5
Education 180
Ethnic Studies 1
Family and Consumer Studies 38
Geography 2, 5, 7
Global Studies 101
History 5A, 5B, 12A, 12B, 14A, 14B, 19, 22, 25, 27, 37, 140, 141, 152, 178
History of Science 11
Psychology 2, 5, 7, 8, 10, 12, 16, 22
Sociology 101, 102, 104, 107, 108, 112

3. HUMANITIES: minimum of 3 semester units
Architecture 104
Art 1, 2, 3, 4, 5A, 5B, 6, 7, 9, 108, 109, 150
Chinese 1, 2, 24
Dance 1, 3
English 1B, 10, 11, 12, 15A, 15B, 18, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 39, 40A, 40B, 41A, 41B, 42, 43, 44, 47, 48
Fashion 31
Film/Video 1, 3, 52, 53, 54abc
French 1, 2, 3, 4, 5, 6, 24, 35
German 1, 2, 3, 4, 5, 24
Humanities 1
Italian 1, 2, 24
Japanese 1, 2, 3, 4
Music 3, 11, 12, 13, 15A, 15B
Philosophy 2, 3, 7, 10, 11, 23
Photography 150
Sign Language/Interpreter Training 15, 16, 17A, 17B
Spanish 1, 2, 3, 4, 5, 6, 24, 52A, 52B
Speech Communication 8
Theatre 1, 4, 8

4. LANGUAGE AND RATIONALITY: minimum of 6 units
One course from A and one course from B:
A. English Composition:
Business 27, 28
English 1A
Journalism 1
B. Communication and Analytical Thinking:
Business 29
Computer Information Systems 13, 16, 80
Computer Science 1, 10
English 1C, 72
Journalism 12
Mathematics 80, 110, 111, 115, 116, 120, 130, 140, 150, 160, 161, 170, 180, 190, 191, 210, 220, 270
Philosophy 5, 8
Psychology 3, 9A
Sociology 109
Speech Communication 1, 3, 4, 5, 12, 14
Supervision 27

5. HEALTH AND PHYSICAL EDUCATION: minimum of 3 semester units
Contemporary Health 1
Physical Education 260
Physical Activity or Fitness Courses:
Dance 9ab, 10, 14ab, 16ab, 17abcd, 18abcd, 19ab, 20abcd, 22ab, 23abcd, 32ab, 33abcd, 35abcd, 42ab, 43abcd, 51ab, 52abcd, 53ab, 54abcd, 62abcd
Physical Education 1abcd, 2abcd, 3abcd, 4abcd, 5ab, 6abc, 7abcd, 14abcd, 15ab, 16abc, 20ab, 21abc, 25ab, 26abc, 35ab, 36abc, 45ab, 46abc, 47abcd, 54abcd, 57ab, 58abc, 60ab, 61abc, 65ab, 66abc, 70ab, 71abc, 74abcd, 75ab, 76abc, 80ab, 81abc, 85ab, 86abc, 87ab, 101abcd, 102abcd, 105ab, 106abc, 110ab, 111abc, 115ab, 116abc, 120ab, 121abc, 125ab, 126abc, 130ab, 131abc, 132ab, 133abc, 135abcd, 204abcd, 208abcd, 218abcd, 221abcd, 224abcd, 232abcd, 238abcd, 240abcd, 241abcd, 244abcd, 245abcd, 246abcd, 250abcd, 251abcd, 253abcd, 256abcd, 280, 282abcd, 285abcd, 300abcd, 302abcd, 400abcd, 401abcd, 402abcd, 404abcd, 407abcd, 409abcd
(This category may be exempted by one of the following:
1) Pass the Contemporary Health waiver exam; or
2) Approval of a petition for military service credit.)

6. MATHEMATICS COMPETENCY
Pass the Mathematics Competency Test (a test separate from the Mathematics Placement Test) equivalent to the first course in algebra (Mathematics 40 or 43) or satisfactorily complete one of the approved courses for this category.
Computer Science 15P
Mathematics 73, 80, 110, 111, 115, 116, 120, 130, 140, 150, 160, 161, 170, 180, 190, 191, 210, 220, 270
Psychology 9A
Sociology 109

OPTION II: CSU TRANSFER REQUIREMENTS
See page 39 of this catalog.

OPTION III: CSU/UC (IGETC) REQUIREMENTS
See page 40 of this catalog.

Section B - Major Requirements

Satisfy either the El Camino College Major option or the Transfer Major option.

El Camino College Major

Complete the courses specified for one of the majors listed alphabetically in Section IV, Curriculum, of this College catalog.

Transfer Major

Complete the lower division transfer major requirements for an accredited four-year college or university. If there are no lower division requirements in the transfer major or if the requirements for the transfer major are less than 18 units, students must complete an El Camino College major.

Section C - Electives

El Camino College Major

To reach the total of 60 degree applicable units required for graduation, students must choose electives from degree applicable courses. Students may count only 6 units of Physical Education as elective credit for graduation.

Transfer Major

60 degree applicable units are required for graduation. To qualify for transfer to CSU or UC, electives must be chosen from transferable courses. Students may count only 4 units of Physical Education as transfer credit.

Associate in Science Degree

A. S. Degree Requirements

Refer to Page 33 for general requirements. Complete requirements specified under Section A, Section B, and Section C.

Section A - General Education Requirements

A student has three options to complete the General Education Requirements.

OPTION I is designed for students completing the El Camino College major.

OPTION II is designed for students completing CSU GE Breadth transfer requirements.

OPTION III is designed for students completing CSU/UC (IGETC) transfer requirements.

OPTION I: EL CAMINO COLLEGE REQUIREMENTS

Complete the specified number of units in categories 1 through 5 and the mathematics competency requirement in category 6.

1. NATURAL SCIENCES: minimum of 3 semester units
Anatomy 30, 32
Anatomy and Physiology 34A, 34B
Anthropology 1
Astronomy 20, 25
Biology 8, 10, 11, 12, 15, 16, 17, 101, 102
Chemistry 1A, 4, 20, 21A
Geography 1, 9
Geology 1, 2, 6, 15
Microbiology 33
Oceanography 10
Physical Science 25
Physics 1A, 2A, 3A, 11
Physiology 31

2. SOCIAL AND BEHAVIORAL SCIENCE: minimum of 3 semester units
One course from A or B, or C:
A. American Studies 1, 3, 7
History 1A, 1B, 8, 9, 16A, 16B, 17, 18A, 18B, 122
Women's Studies 1
B. Political Science 1, 5, 6, 8
C. Anthropology 2, 3, 4, 6, 8, 10
Business 17, 22
Child Development 103, 104
Economics 1, 2, 5
Education 180
Ethnic Studies 1
Family and Consumer Studies 38
Geography 2, 5, 7
Global Studies 101
History 5A, 5B, 12A, 12B, 14A, 14B, 19, 22, 25, 27, 37, 140, 141, 152, 178
History of Science 11
Psychology 2, 5, 7, 8, 10, 12, 16, 22
Sociology 101, 102, 104, 107, 108, 112

3. HUMANITIES: minimum of 3 semester units
Architecture 104
Art 1, 2, 3, 4, 5A, 5B, 6, 7, 9, 108, 109, 150
Chinese 1, 2, 24
Dance 1, 3
English 1B, 10, 11, 12, 15A, 15B, 18, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 39, 40A, 40B, 41A, 41B, 42, 43, 44, 47, 48
Fashion 31
Film/Video 1, 3, 52, 53, 54abc
French 1, 2, 3, 4, 5, 6, 24, 35
German 1, 2, 3, 4, 5
Humanities 1
Italian 1, 2, 24
Japanese 1, 2, 3, 4
Music 11, 12, 13, 15A, 15B
Philosophy 2, 3, 7, 10, 11, 23
Photography 150
Sign Language/Interpreter Training 15, 16, 17A, 17B
Spanish 1, 2, 3, 4, 5, 6, 24, 52A, 52B
Speech Communication 8
Theatre 1, 4, 8

4. LANGUAGE AND RATIONALITY: minimum of 6 units
One course from A and one course from B:
A. English Composition:
Business 27, 28
English 1A
Journalism 1
B. Communication and Analytical Thinking:
Business 29
Computer Information Systems 13, 16, 80
Computer Science 1, 10
English 1C, 72
Journalism 12
Mathematics 80, 110, 111, 115, 116, 120, 130, 140, 150, 160, 161, 170, 180, 190,191, 210, 220, 270
Philosophy 5, 8
Psychology 3, 9A
Sociology 109
Speech Communication 1, 3, 4, 5, 12, 14
Supervision 27

5. HEALTH AND PHYSICAL EDUCATION: minimum of 3 semester units
Contemporary Health 1
Physical Education 260
Physical Activity or Fitness Courses:
Dance 9ab, 10, 14ab, 16ab, 17abcd, 18abcd, 19ab, 20abcd, 22ab, 23abcd, 32ab, 33abcd, 35abcd, 42ab, 43abcd, 51ab, 52abcd, 53ab, 54abcd, 62abcd
Physical Education 1abcd, 2abcd, 3abcd, 4abcd, 5ab, 6abc, 7abcd, 14abcd, 15ab, 16abc, 20ab, 21abc, 25ab, 26abc, 35ab, 36abc, 45ab, 46abc, 47abcd, 54abcd, 57ab, 58abc, 60ab, 61abc, 65ab, 66abc,

70ab, 71abc, 74abcd, 75ab, 76abc, 80ab, 81abc, 85ab, 86abc, 87ab, 101abcd, 102abcd, 105ab, 106abc, 110ab, 111abc, 115ab, 116abc, 120ab, 121abc, 125ab, 126abc, 130ab, 131abc, 132ab, 133abc, 135abcd, 204abcd, 208abcd, 218abcd, 221abcd, 224abcd, 232abcd, 238abcd, 240abcd, 241abcd, 244abcd, 245abcd, 246abcd, 250abcd, 251abcd, 253abcd, 256abcd, 280, 282abcd, 285abcd, 300abcd, 302abcd, 400abcd, 401abcd, 402abcd, 404abcd, 407abcd, 409abcd
(This category may be exempted by one of the following:
1) Pass the Contemporary Health waiver exam; or
2) Approval of a petition for military service credit; or
3) Completion of Nursing 151 and 155.)

6. MATHEMATICS COMPETENCY
Pass the Mathematics Competency Test (a test separate from the Mathematics Placement Test) equivalent to the first course in algebra (Mathematics 40 or 43) or satisfactorily complete one of the approved courses for this category.
Computer Science 15P
Mathematics 73, 80, 110, 111, 115, 116, 120, 130, 140, 150, 160, 161, 170, 180, 190, 191, 210, 220, 270
Psychology 9A
Sociology 109

OPTION II: CSU TRANSFER REQUIREMENTS
See page 39 of this catalog.

OPTION III: CSU/UC (IGETC) REQUIREMENTS
See page 40 of this catalog.

Section B - Major Requirements

Satisfy either the El Camino College Major option or the Transfer Major option.

El Camino College Major

Complete the courses specified for one of the majors listed alphabetically in Section IV, Curriculum, of this College catalog.

Transfer Major

Complete the lower division transfer major requirements for an accredited four-year college or university. If there are no lower division requirements in the transfer major or if the requirements for the transfer major are less than 18 units, students must complete an El Camino College major.

Section C - Electives

El Camino College Major

To reach the total of 60 degree applicable units required for graduation, students must choose electives from degree applicable courses. Students may count only 6 units of Physical Education as elective credit for graduation.

Transfer Major

60 degree applicable units are required for graduation. To qualify for transfer to CSU or UC, electives must be chosen from transferable courses. Students may count only four units of Physical Education as transfer credit.

Certificates

El Camino College offers a variety of certificate programs. A Certificate of Achievement is recorded on a student's transcript. A Certificate of Accomplishment is not recorded on the transcript.

Each of the programs requires completion of courses in a particular field. Unlike degree programs, courses outside the field are not generally required. For specific certificate requirements, consult Section IV, Curriculum, of this catalog.

Students must file a petition for a certificate in the evaluations area, which is located in the Admissions Office, by the deadline date published in the schedule of classes.

Certificate of Achievement

- ❑ A Certificate of Achievement is awarded to students who complete the prescribed program with a 2.0 grade point average.
- ❑ A Certificate of Achievement with Honors is awarded to students who complete the prescribed program with a 3.0 grade point average.
- ❑ A Certificate of Achievement with High Honors is awarded to students who complete the prescribed program with a 3.5 grade point average or above.

Certificate of Accomplishment

- ❑ A Certificate of Accomplishment is awarded to students who complete the prescribed program with a 2.0 grade point average or above.

Certificates of Achievement and Accomplishment Programs

Certificates of Achievement

Administration of Justice
Administration of Justice/Reserve Police Officer Academy (pending System Office approval)
Air Conditioning and Refrigeration (pending System Office approval)
Air Conditioning and Refrigeration/Air Conditioning and Refrigeration Electric Controls (pending System Office approval)
Air Conditioning and Refrigeration/Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration
Air Conditioning and Refrigeration/Refrigeration (pending System Office approval)
Architecture
Art/Digital Arts: Computer Animation
Art/Digital Arts: Digital Photography
Art/Digital Arts: Graphic Design
Art/Digital Arts: Illustration
Art/Digital Arts: Motion Graphics
Art/Digital Arts: Web Design
Art/Gallery Management
Art/Jewelry Design and Fabrication
Automotive Collision Repair/Painting I
Automotive Collision Repair/Painting II
Automotive Technology/Automotive Brakes/Suspension, Transmission/Drive Train Technician (pending System Office approval)
Automotive Technology/Automotive Engine Rebuilding/Repair Technician (pending System Office approval)
Automotive Technology/Automotive Technician I
Automotive Technology/Automotive Technician II
Automotive Technology/Automotive Tune-up Technician (pending System Office approval)
Business/Accounting
Business/Bookkeeping Clerk
Business/Business Management
Business/International Business (pending System Office approval)
Business/Marketing
Business/Office Applications Specialist
Business/Office Clerk (pending System Office approval)
Business/Retail Management
Childhood Education/Early Childhood Education
Childhood Education/Early Intervention Assistant (pending System Office approval)

Childhood Education/Special Education Assistant
Computer Aided Design/Drafting
Computer Information Systems/Cisco Networking Administration (pending System Office approval)
Computer Information Systems/Microcomputer Applications
Computer Information Systems/Microcomputer Support and Network Management
Computer Information Systems/Web Programming (pending System Office approval)
Computer Science
Construction Technology
Construction Technology/Cabinet and Fine Woodworking
Cosmetology Level II (pending System Office approval)
Cosmetology Level III
Electronics and Computer Hardware Technology/ Communications Equipment Technician
Electronics and Computer Hardware Technology/ Computer Hardware Electronics Technician
Electronics and Computer Hardware Technology/ Electronics Engineering Technician
Electronics and Computer Hardware Technology/ Industrial Computer Control Technician
Engineering Technology (pending System Office approval)
Engineering Technology/Engineering Technician (pending System Office approval)
Environmental Horticulture
Environmental Technology/Environmental Technology Hazardous Materials
Environmental Technology/ Environmental Technology Occupational Safety and Health
Fashion/Computer Pattern Making Technician (pending System Office approval)
Fashion/Costume Technician
Fashion/Fashion Design and Production
Fashion/Fashion Merchandising
Fashion/Fashion Stylist
Film/Video/Film/Video Production
Fire and Emergency Technology
Fire and Emergency Technology/Fire Academy
Fire and Emergency Technology/Paramedical Technician
Journalism
Machine Tool Technology/CNC Machine Operator (pending System Office approval)
Machine Tool Technology/Machinist
Machine Tool Technology/Numerical Control Programmer
Manufacturing Technology
Music/Commercial Music (pending System Office approval)
Paralegal Studies
Photography
Quality Assurance
Real Estate
Real Estate/Mortgage Loan Brokerage
Real Estate/Real Estate Appraisal
Real Estate/Real Estate Assistant (pending System Office approval)
Respiratory Care
School Health Clerk
Sign Language/Interpreter Training
Speech Communication (pending System Office approval)
Theatre/Entertainment Lighting Technology
Welding I
Welding II

Certificates of Accomplishment

Administration of Justice/Security Officer
Automotive Collision Repair/Painting/ Automotive Accident Reconstruction
Automotive Collision Repair/Painting/ Automotive Collision Investigation
Automotive Technology/Automotive Air Conditioning Technician
Automotive Technology/Automotive Brakes and Suspension Technician
Automotive Technology/Automotive Engine Rebuilding and Repair Technician
Automotive Technology/Automotive Transmission and Drive Train Technician
Computer Aided Design/Drafting - AutoCad Mechanical Drafting Trainee
Cosmetology Level I
Electronics and Computer Hardware Technology/ Computer Hardware Technician
Electronics and Computer Hardware Technician/ Electronics Technician
Electronics and Computer Hardware Technology/ Powerline Industry Readiness
Radiologic Technology

Evaluation of Completion of Requirements

The Certificate of Achievement or the Certificate of Accomplishment will be evaluated according to the following conditions:

1. Catalog requirement: Certificate requirements are derived from the catalog in effect at the time the student entered El Camino College or from the current catalog, following the Catalog Rights guidelines. (Please refer to the Associate Degree section of this catalog.) Each catalog is in effect during the academic year for which it is published (fall semester through the summer session).

2. Residency requirement: Individual certificates specifically state the required number of units that must be completed at El Camino College.

Preparation for Transfer

Students who wish to transfer to a four-year university should complete admission requirements at the community college prior to transfer. Requirements vary among institutions. Therefore, students should become familiar with the courses for 1) general education, 2) major preparation, 3) admission requirements for selective majors, and 4) GPA (grade point average) needed for admission.

Since requirements can change, it is to the student's advantage to select a transfer institution as early as possible and meet with an academic counselor, transfer center advisor, the university representative, and/or articulation officer for updated information. Students are encouraged to view the ASSIST Web site at www.assist.org, which provides the most up-to-date information on course articulation for California public universities, or www.elcamino.edu/studentservices/co/.

In addition, students are welcome to visit the Transfer Center in the Student Services Center building. The Transfer Center offers a variety of services to assist students with the transfer process such as workshops, university fairs, campus tours, application assistance, and university contacts.

California State University

The California State University system consists of 23 campuses located throughout the state. While each campus within the system has its own unique geographic and academic character, all campuses offer bachelor's and master's degrees in a variety of subject areas.

California State University Admission Requirements

1. Lower Division Transfer Requirements:

Students who have completed 59 or fewer transferable semester units (or 89 or fewer transferable quarter units) with a 2.0 grade point average by the time of entry to a CSU are considered a lower division applicant. Students are eligible for admission if they:

- ❑ Were eligible as a freshman at the time of high school graduation and
- ❑ Were in good standing at the last college or university attended.

Some campuses may also expect students to complete, with a C or better, general education courses in English composition and general education mathematics prior to admission. Students should check the individual transfer campus to see if the campus is accepting lower division transfers at www.csumentor.edu.

2. Upper Division Transfer Requirements:

Students that have at least 60 transferable semester units (or 90 transferable quarter units) with a 2.0 grade point average (2.4 for non-residents) completed by the time of entry to a CSU, are considered an upper division applicant. Applicants are eligible for admission to the CSU if they:

- ❑ Are in good standing at the last college or university attended and
- ❑ Have completed 30 units of general education to include: one course in written communication, one course in oral communication, one course in critical thinking, and one transferable course in mathematics. The four courses must be completed with a grade of C or better.

Campuses that are impacted have supplemental admission criteria. Students should meet with a counselor and visit: www.calstate.edu/SAS/impactioninfo.shtml for additional information.

CSU General Education Breadth Requirements

General Education Breadth Requirements are designed so that, students may take lower devision general education courses at a California community college such that when a student transfers, the student will have completed most, if not all, of the lower division general education requirements.

Certification

Certification means that El Camino College has verified that the student has completed the lower division general education requirements for the CSU. For full certification, students must complete 39 units from Categories A through E of the CSU General Education Requirements. Twelve of the 39 units must be completed at El Camino College. CSU certification may be requested at the Records Window.

CSU General Education Requirements

Area A - Communication in the English Language and Critical Thinking (9 units required)

One course from each subsection.

1. Speech Communication 1, 3, 4, 12
2. English 1A
3. English 1C, Philosophy 5, 8, Psychology 3, Speech Communication 4

Area B - Physical Universe and its Life Forms (minimum 9 units)

One course must be completed from each subsections; one course must include a laboratory (marked by *).

Note: an entry level mathematics Examination (ELM) is required by CSU unless the student is certified in area B3 by a community college.

1. Physical Sciences:
Astronomy 12*, 20, 25
Chemistry 1A*, 4*, 20*, 21A*
Geography 1, 6*, 9
Geology 1, 2, 3*, 4*, 6*, 15, 30*, 32*, 34*, 36*
Oceanography 10*
Physical Science 25*
Physics 1A*, 2A*, 3A*, 3B*, 11, 12*

2. Life Sciences:
Anatomy 30*, 32*
Anthropology 1, 5*
Biology 8*, 10*, 11*, 12*, 15, 16*, 17, 18*, 101*, 102*, 103

3. The courses listed above in B.1. and B.2. marked with an asterisk meet the laboratory requirement.

4. Mathematics/Quantitative Reasoning:
Mathematics 110, 111, 115, 120, 130, 140, 150, 160, 170, 180, 190, 210
Psychology 9A
Sociology 109

Area C - Arts, Literature, Philosophy and Foreign Languages (minimum 9 units)

At least one course from subsection 1 and one course from subsection 2.

1. Arts:
Architecture 104
Art 1, 2, 3, 4, 5A, 5B, 6, 7, 9, 108, 150
Dance 1, 3
Film/Video 1, 52, 53, 54abc
Music 11, 12, 13, 15A, 15B
Speech Communication 8
Theater 1, 4, 8

2. Humanities:
American Studies 7
Chinese 1, 2, 24
English 1B, 10, 11, 12, 15A, 15B, 18, 20, 21, 22, 23, 24A, 25A, 26, 27, 28, 29, 30, 31, 34, 35, 36, 39, 40A, 40B, 41A, 41B, 42, 43, 44, 46, 47, 48
French 1, 2, 3, 4, 5, 6, 24, 35
German 1, 2, 3, 4, 5, 24
History 8, 37, 140, 141
Humanities 1
Italian 1, 2, 24
Japanese 1, 2, 3, 4, 25
Philosophy 2, 3, 7, 10, 11, 23
Sign Language/Interpreter Training 15, 16, 17A, 17B
Spanish 1, 2, 3, 4, 5, 6, 24, 52A, 52B

Area D - Social, Political and Economic Institutions and Behavior; Historical Background (minimum 9 units)

Courses must be selected from at least two different subsections. Courses listed in more than one subsection can be used for credit in one subsection only.

1. Anthropology and Archaeology:
Anthropology 2, 3, 4, 6, 7, 8, 9, 10, 11

2. Economics:
Economics 1, 2, 5

3. Ethnic Studies:
American Studies 3
Ethnic Studies 1
History 9, 16A, 16B, 17, 32
Political Science 5
Psychology 10
Sociology 107
Speech Communication 14

4. Gender Studies:
Anthropology 9
History 18A, 18B
Women's Studies 1

5. Geography:
Geography 2, 5, 7

6. History:
History 1A, 1B, 5A, 5B, 8, 9, 11, 12A, 12B, 14A, 14B, 16A, 16B, 17, 18A, 18B, 19, 22, 25, 27, 30, 32, 37, 140, 141
History of Science 11

7. Interdisciplinary Social/Behavioral Science:
American Studies 1, 3, 7
Child Development 3
Global Studies 101
History 6
Journalism 12
Speech Communication 5, 14

8. Political Science, Government and Legal Institutions:
Political Science 1, 2, 3, 5, 6, 8, 10

9. Psychology:
Physical Education 275
Psychology 5, 8, 9B, 10, 11, 12, 15, 16, 21, 22 (same as Physical Education 275)

10. Sociology and Criminology:
Sociology 101, 102, 104, 107, 112

Area E - Lifelong Understanding and Self-Development
(3 units)
Child Development 3
Contemporary Health 1
Human Development 10
Nutrition and Foods 11
Physical Education 280
Psychology 2, 12, 16, 22 (same as Physical Education 275), 33
Sociology 102

One unit may be taken from: Physical Education 1abcd, 2abcd, 4abcd, 7abcd, 47abcd, 54abcd, 220abcd, 221abcd, 232abcd, 241abcd, 242abcd, 246abcd, 251abcd, 260, 300abcd, 400abcd, 401abcd, 402abcd, 403abcd *(Warning: an Area E approved two-unit course would be required with one of these one-unit courses to meet the 3 unit minimum. El Camino College does not currently offer an approved 2-unit course in this area. See your counselor for further information.)*

All CSU campuses have a graduation requirement in U.S. History, Constitution, and American Ideals of 6 semester units. One course is required from Group 1 and one course is required from Group 2.

Group 1: History 1A 1B, 9, 16A, 16B, 17, 18A, 18B, 32
Group 2: Political Science 1, 8

University of California

The University of California has 10 campuses located throughout the state. Each campus within the system has its own unique geographic and academic character. The university offers bachelor's, master's, and doctoral degrees in a variety of subject areas.

University of California Admission Requirements

To be minimally eligible for admission to the University as a transfer student, a student must fulfill the following criteria:

A. Complete 60 UC transferable semester units (90 quarter units) with a minimum GPA of 2.4 (2.8 for non-residents).

B. Complete the following course pattern requirements, earning a grade of C or better in each course: two transferable college courses in English composition; one transferable college course in mathematical concepts and quantitative reasoning; four transferable college courses chosen from at least two of the following subject areas: arts and humanities, social and behavioral sciences, and physical and biological sciences. Note: The IGETC General Education Transfer Pattern will meet these course requirements. However, some students, depending on the transfer major and university, may not be well served by following IGETC.

C. Complete as many major preparation courses as possible. Major preparation may be viewed at www.assist.org. Note: Selective majors are requiring certain courses to be completed before transfer with a higher grade point average.

The University of California allows up to 70 UC transferable units from a community college. Students who complete more than 70 units at the community college may still complete courses to fulfill course requirements but will not be able to transfer more than the 70 units of credit to the University.

Intersegmental General Education Transfer Curriculum (IGETC)

The Intersegmental General Education Transfer Curriculum (IGETC) is a series of courses prospective transfer students attending California community colleges may complete at the community college to satisfy the lower division breadth/general education requirements at both the University of California and the California State University.

Students have the option of completing the IGETC or the specific lower division breadth/general education requirements of the school or college at the campus they plan to attend. The IGETC must be completed prior to transfer. The University has an agreement with each California community college that specifies which of its courses may be applied to each category of the IGETC. All courses must be completed with a grade of C or better.

The IGETC is most helpful to students who want to keep their options open. Certain students, however, will not be well served by following IGETC. Students, who intend to transfer into majors that require extensive lower division preparation, such as those in engineering or the physical and natural sciences, should concentrate on completing as many prerequisites for the major before transfer.

The IGETC is not an admission requirement. Completing IGETC does not guarantee admission to the campus or program of choice. However, completing the lower division breadth/general education requirements, whether through the IGETC or the campus specific requirements, may be considered by the campus in the selection process. Students who do not complete the IGETC before transferring will be required to satisfy the campus-specific lower division general education requirements of the college they attend.

Certification

Certification means that the last community college attended prior to transfer will verify that the student has completed the entire IGETC pattern. It is the student's responsibility to obtain full certification during the last semester of attendance prior to transfer. IGETC certification may be requested at the Records Window.

IGETC Course Requirements

Area 1: English Communication

UC and CSU transfers complete groups A and B; Group C is required for CSU transfers only.

Group A: English 1A

Group B: One course from: English 1C, Philosophy 5, Psychology 3; [The following two - course combinations acceptable if English 1B was taken prior to fall, 1993: English 1B and Philosophy 8 or English 1B and Psychology 3 (Psychology 3 stands alone if taken fall, 1992 or later)]

Group C (CSU transfers only): One course from: Speech Communication 1, 3, 4, 12?

Area 2: Mathematical Concepts and Quantitative Reasoning

One course, 3 semester or 4-5 quarter units:
Mathematics 115ø #, 120, 130+, 140, 150#, 160#, 161#, 180#, 190#, 191#, 210, 220, 270
Psychology 9A?
Sociology 109?

Area 3: Arts and Humanities

Three courses, 9 semester or 12-15 quarter units; at least one course from Arts and one course from Humanities:

A. Arts:

Art 1, 2, 3, 4, 5A, 5B, 6, 7, 9&, 108, 150
Dance 1$, 3°
Film/Video 1&, 54abc
Music 11, 12, 13, 15A, 15B
Theatre 1, 4

B. Humanities:

American Studies 7
Chinese 2?, 24
English 1B+, 10+, 11+, 12+, 15A, 15B, 18, 20, 21, 23, 26⌖, 28, 29, 30, 31, 35, 36, 39, 40A~, 40B~, 41A◴#, 41B◴, 42~, 44, 46ø, 47, 48
Film/Video 52, 53
French 24⌖, 35^
History 1A, 1B, 5A, 5B, 8?, 11, 14A, 14B, 19, 22°, 30, 32, 37, 140, 141
Humanities 1?
Italian 24
Japanese 2
Philosophy 2, 3, 7, 10, 11, 23
Sign Language Interpreter Training 16?, 17A?
Spanish 52A◴, 52B◴, 24⌖

Area 4: Social and Behavioral Sciences

Three courses, 9 semester or 12-15 quarter units, from at least two disciplines or an interdisciplinary sequence:

American Studies 1?, 3?, 7~
Anthropology 2, 3, 4?, 6, 7?, 8°, 9?, 11?
Child Development 3&
Economics 1, 2, 5#
Ethnic Studies 1?
Geography 2, 5, 7
Global Studies 101
History 8?, 9, 12A⌖,12B?, 16A~, 16B~, 17~,18A~, 18B~, 25?, 27, 37, 140, 141
History of Science 11⏃
Journalism 12
Political Science 1#, 2, 3, 5, 6⌖, 10
Psychology 5, 8, 10~, 11, 12?, 15?, 16◴, 21?
Sociology 101, 102?, 104, 107?, 112?
Speech Communication 5?, 14?
Women's Studies 1>

Area 5: Physical and Biological Sciences

Two courses, 7-9 semester or 9-12 quarter units; one physical science course, one biological science course; at least one course must include a laboratory (*indicates a lab course):

A. Physical Sciences:

Astronomy 12, 20#, 25#
Chemistry 1A*, 1B*, 4*#, 7A*, 7B*, 20*#, 21A*, 21B*
Geography 1, 6*, 9
Geology 1, 2, 3*4*, 15^
Oceanography 10*
Physical Science 25?
Physics 1A*#, 1B*#, 1C*#, 1D*#, 2A*#, 2B*#, 3A*>, 3B*$, 11#, 12*#

B. Biological Sciences:

Anatomy 30*#, 32*#
Anthropology 1, 5
Biology 8*$, 10*#, 11*>, 15, 16*, 17$, 18*$, 101*, 102*, 103$
Microbiology 33*
Physiology 31*#
Psychology 7

UC Only: Language other than English: Proficiency equivalent to two years of high school study in the same language or at least one semester of college level foreign language course work.

Appropriate courses at El Camino College: Chinese 1, French 1, German 1, Italian 1, Japanese 1, Sign Language Interpreter Training 15?, Spanish 1.

CSU Only: Graduation requirement in American History and American Institutions.

History: 1A, 1B, 9, 16A, 16B, 17, 18A, 18B, 32
Institutions: Political Science 1, 8

\+ Indicates course only acceptable in this area if taken fall, 1993 or later.
^ Indicates course only acceptable in this area if taken fall, 1995 or later.
~ Indicates course only acceptable in this area if taken fall 1997 or later.
> Indicates course only acceptable in this area if taken fall, 1998 or later.
$ Indicates course only acceptable in this area if taken fall, 1999 or later.
° Indicates course only acceptable in this area if taken fall, 2000 or later.
? Indicates course only acceptable in this area if taken fall, 2001 or later.
◴ Indicates course only acceptable in this area if taken fall, 2002 or later.
ø Indicates course only acceptable in this area if taken fall, 2003 or later.
& Indicates course only acceptable in this area if taken fall, 2004 or later.
⏃ Indicates course only acceptable in this area if taken fall, 2005 or later.
⌖ Indicates course only acceptable in this area if taken fall, 2006 or later.
? Indicates course only acceptable in this area if taken fall, 2007 or later.
# Indicates that transfer credit may be limited by UC or CSU or both; please consult with a counselor.

Honors Programs

Alpha Gamma Sigma

Alpha Gamma Sigma, the Honor and Scholarship Society, is a California Community College statewide organization founded to foster, promote, maintain, and recognize scholastic achievement and service among community college students. The Alpha Phi chapter of AGS at El Camino College attracts many students of all majors desiring academic excellence.

A student may attain initial membership by having completed 12 semester units from a recognized institution of higher education with a cumulative GPA of 3.0 or above. Students joining directly out of high school are asked to have a minimum GPA of 3.5 at the high school level.

Because AGS is also a club and one of the largest organizations on campus, there are many opportunities for college and community involvement.

Permanent (lifetime) Members of Alpha Gamma Sigma receive a notation on their transcripts, a gold seal on their diplomas, and wear gold stoles during the commencement ceremonies. Permanent Member status may be achieved by completing 60 units (30 completed at El Camino College) with a 3.5 GPA and regular membership for at least one semester or by having a 3.25 GPA and regular membership for at least two semesters.

Membership applications are accepted during the first six weeks of each semester and are available in the Activities Center, at the AGS information table during club rush week, and at AGS general meetings.

Dean's List

To qualify for the Dean's List, a student must, in any one semester, complete 12 or more units with a grade point average of 3.5 or higher. For further information, contact the office of the Vice President, Academic Affairs.

Honors Transfer Program

The El Camino College Honors Transfer Program is designed to better prepare the highly motivated student to transfer successfully to a university and complete a bachelor's degree. The program provides a unique learning environment which stresses scholastic excellence and develops the academic awareness necessary to

achieve this goal.

The major objective of the program is to prepare students for transfer by focusing on enhanced writing, reading and study skills.

The Honors Transfer Program office is located in the Counseling Division, Student Services Center Building, first floor.

Honors Admission Requirements

A student must:

1. Have a minimum 3.0 cumulative GPA from high school or, if already in college, from at least 9 graded academic units;
2. Be eligible for or have completed English 1A; and
3. Complete an Honors Transfer Program application and submit all required materials.

Completion Requirements

A student must:

1. Maintain a minimum 3.0 cumulative GPA in all courses;
2. Complete a minimum of two semesters in the Honors Transfer Program at El Camino College;
3. Complete a minimum of five honors courses including at least one honors course each semester. English 1A must be completed (unless already completed) during the first semester in the program;
4. Attend four honors enrichment seminars during the program;
5. Complete two scheduled half-hour (Educational Plan) counseling appointments; and
6. Complete the requirements necessary to be accepted by the transfer institution in your major.

Honors Transfer Agreements

Students who complete the El Camino College Honors Transfer Program may take advantage of transfer agreements with a number of colleges and universities. These transfer agreements may include priority admission, scholarship opportunities, admission to the university honors programs, library privileges and housing priority. Colleges and universities involved in transfer agreements with El Camino College include UCLA, UC Irvine, Loyola Marymount University, Pomona College, Occidental College, UC Riverside, UC Santa Cruz, Chapman University, Pitzer College, CSU Dominguez Hills, CSU Fullerton, Cal Poly Pomona, San Diego State University, and CSU Long Beach.

Honors Transfer Program Benefits

Benefits include:

- Priority registration for all El Camino College classes
- Close academic and social interaction with other highly motivated honors students
- Enrollment in honors classes with smaller class size and taught by outstanding faculty
- Designation of the Honors Transfer Program on the El Camino College transcripts and on the El Camino College associate degrees
- A parchment quality Award of Achievement upon program completion
- An honors program counselor, director and assistant for special help and advisement
- Enrichment seminars which provide information leading to academic and personal growth
- Increased chances of receiving scholarships
- Special privileges offered by universities with which El Camino College has an honors transfer agreement

Honors Curriculum

Honors courses are academically enriched to intellectually stimulate students, encourage independent, critical thinking and promote close interaction between students and faculty.

Honors courses are chosen to fulfill the requirements of the associate degree as well as to transfer to UC, CSU and most other universities. Thus, students in the Honors Transfer Program generally complete the same number of courses as other students planning to transfer. Honors sections are currently offered for the following courses:

Anthropology 1 - Introduction to Physical Anthropology
Anthropology 2 - Introduction to Cultural Anthropology
Art 6 - Cross-Cultural Art
Astronomy 25 - Stars and Galaxies
Astronomy 20 – The Solar System
Biology 10 - Fundamentals of Biology
Economics 1 - Principles of Economics: Macroeconomics
English 1A - Reading and Composition
English 1B - Literature and Composition
English 1C - Critical Thinking and Composition
Film/Video1 - Film Analysis and Appreciation
Geography 5 - World Regional Geography
History 1A - United States History to 1877
History 1B - United States History from 1877 to the Present
History 122 - United States Social History: Cultural Pluralism in America
Music 12 - Music Cultures of the World
Oceanography 10 - Introduction to Oceanography
Philosophy 23 - Ethics, Law and Society
Political Science 1 - Governments of the United States and California
Political Science 10 - Introduction to International Relations
Psychology 5 - General Psychology
Sociology 101 - Principles of Sociology
Speech Communication 1 - Effective Speaking
Speech Communication 3 - Group Discussion
Speech Communication 4 - Argumentation and Debate
Speech Communication 12 - Interpersonal Communication

In fulfilling the requirements for program completion, Honors Transfer Program students may include up to two of the following honors-level courses: Biology 1A, 1B; Chemistry 1A, 1B; Computer Science 1; Mathematics 190, 191; and Physics 1A, 1B.

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Academic Support

High School Equivalents

Many courses and curricula offered at El Camino College are based on the supposition that the student has completed the specific high school courses generally included in the college preparatory program. If the student has not met the prerequisite to a course, the individual should complete the equivalent El Camino College course indicated here:

High School Course	El Camino College Course
Algebra, first year	Mathematics 40 or Mathematics 33 and Mathematics 43
Algebra, second year	Mathematics 73 or 80
Geometry, one year	Mathematics 60
Trigonometry, one semester	Mathematics 170
Physics, one year	Physics 11 and 12
Chemistry, one year	Chemistry 4
Mechanical Drawing, one year	Computer-Aided Design/Drafting 5
Language, two years in one	First semester language

Tutorial Services

The Learning Resources Center Tutorial Program located in the Library offers free drop-in tutoring for over 40 subjects. All tutoring is provided by highly trained, nationally certified tutors. Any registered El Camino College student can meet with a tutor on a drop-in basis. No reservations are required. Students may work with tutors individually or in small groups. Drop-in tutoring for some subjects is also available at other campus locations.

Distance Education

Many courses offered on the El Camino College campus may be taken through the Distance Education program. Telecourses, two-way interactive courses via video, and online courses via computer and the web are offered. Distance Education courses are ideal for students who need a flexible class schedule because most of the coursework may be completed off campus.

Students may register for Distance Education courses during registration via www.elcamino.edu. For further information, stop in the Distance Education Office located in the Schauerman Library, East Wing, Lower Level, Room 76, call 310-660-6453, or visit www.elcamino.edu/library/Distance-Ed. Office hours during a regular semester are Monday through Friday, 8:00 am. to 4:30 p.m. During the summer session, the office is closed on Fridays.

Study Abroad

The Study Abroad Program at El Camino College is designed to foster international and multi-cultural understanding and enrichment for students enrolled in an academic program abroad. Students who participate in the program will experience other cultures first-hand in the host country of study.

Courses offered abroad encourage growth and innovation in fine arts, foreign language, humanities, social sciences and other areas. The global perspective acquired through a study abroad program will help students enhance their educational perspective and assist them in better understanding the international cultural setting of California and the Pacific Rim.

The Study Abroad Program is committed to providing a strong academic foundation for students in foreign and overseas academic programs while nurturing multi-cultural awareness of interrelationships among the global community of the 21st Century.

Students who are eligible for Financial Aid may qualify for grants and/or loans to cover cost of study abroad fees.

Cooperative Career Education

Cooperative Work Experience Education (CWEE) is a course designed for students who are cross-training at their current worksite for upward mobility or possible career changes, as well as those looking for entry-level occupational training through work-based learning experiences and internships. CWEE uses the entire community as the laboratory, allowing students to apply theoretical information learned in the classroom to practical problems at work. It enables students to compare their personal goals and expectations with specific career requirements and to learn from professionals and technical experts working in their career field.

Interested students must be employed or volunteering in a job directly related to their major/career goal and concurrently enrolled or have completed a class in that major. Employers must be willing to let students engage in new learning experiences at work and be willing to assist CWEE instructors in the preparation of learning objectives/evaluations. CWEE students must enroll in a minimum of 7 units (including CWEE). Students not enrolled in 7 units should contact the appropriate Academic Affairs Division Office. For more information, please refer to page 104.

Academic Freedom

Board Policy 4030

The El Camino Community College District recognizes that institutions of higher education are conducted for the common good and not to further the interest of either the individual faculty member or the institution as a whole. The common good depends upon the free search for truth and its free expression. Academic freedom is essential to these purposes and applies to both teaching and research. Academic freedom is essential to these purposes and applies to both teaching and research. Academic freedom is fundamental for the protection of the rights of the faculty member in teaching and of the student in learning. It carries with it responsibilities correlative with rights. Accordingly, a faculty member shall have the freedom:

1. To examine or endorse unpopular or controversial ideas either in classroom teaching or in discussions with students as is appropriate to the course content, or in academic research or publication, while recognizing the responsibility to be accurate, objective and respectful of others. Faculty also have the responsibility to grade students solely on the basis of evidence of knowledge of the material pertinent to the class and attainment of appropriate skills, or other generally accepted grading criteria, avoiding any bias generated by a student's political outlook, religious belief or other personal attributes.

2. To select or recommend the selection of course instructional materials that may contain unpopular or controversial ideas, with the correlative responsibility that these materials are pertinent for the course.

3. To speak or write as a citizen, provided that the faculty member recognizes the special professional obligations of an educator to be accurate, objective and respectful of others, and that the fac-

ulty member takes care to avoid leaving the impression that he or she is speaking for the college or the district.

4. To select or recommend library books, materials, media and online resources representing a multiplicity of philosophies and points of view, relying on professional expertise to maintain appropriate depth and breadth of the collections.

A faculty member shall not be subject to any adverse action affecting his or her employment with the El Camino Community College District for exercising any of the foregoing choices.

General Course Information

Catalog Course Description

The courses and programs presented on the next pages meet standards approved by the Board of Governors of the California Community Colleges as stated in the California Administrative Code, Title 5, Section 55002. All courses are taught by qualified instructors in accordance with a set of instructional objectives common to all students.

Appearance of a course description in this catalog does not obligate El Camino College to offer the course in any particular semester. For courses being offered currently, refer to the Schedule of Classes which is published every spring, summer and fall. The Schedule of Classes is available free of charge before each semester in the Office of Admissions and Records. It is also available at area libraries and in high schools.

Course Numbering

Courses listed in this catalog are one semester courses. Those with an upper case letter after the number, such as English 1A-1B, are a sequence and are organized accordingly.

Lower case letters after the course number, such as Music 20abcd, indicate the number of semesters the student may enroll in the course. Course sequences with a numerical designation only indicate that the subject be taken in the order beginning with the lowest number. Spanish 1, 2, 3, and 4 is an example.

Numbering on non-sequential courses does not necessarily indicate the order in which such courses must be taken. In all cases, the prerequisites and corequisites must be met before a student will be permitted to enroll.

Prerequisite, Corequisite, Recommended Preparation, Enrollment Limitation

Prerequisite: A Prerequisite is a condition of enrollment that a student is required to meet before enrolling in a course or educational program. A student who has not met the prerequisite would be highly unlikely to succeed in the course.

This requirement also applies to pre-collegiate basic skills prerequisites, which provide foundation skills in reading, writing and mathematics. Occasionally, students attempting to enroll in a pre-collegiate basic skills course will discover that all sections of that basic skills course have been filled. In these situations, students may petition to have the prerequisite course waived for that particular term. Guidelines and forms for requesting a waiver for a basic skills prerequisite are available in the Counseling Office.

Corequisite: A Corequisite is a course that a student is required to take simultaneously to enroll in another course.

Recommended Preparation: Recommended Preparation is a condition of enrollment that a student is advised, but not required, to meet before, or in conjunction with, enrollment in a course or educational program.

Enrollment Limitation: An Enrollment Limitation means that a student may be required to meet certain conditions before enrolling in a course. This may apply to such courses as intercollegiate competition courses, public performance courses or honors courses.

A course Prerequisite, Corequisite, Recommended Preparation or Enrollment Limitation is subject to change. Questions regarding the status of the conditions of enrollment for a particular course should be directed to the academic division responsible for the course.

Challenging a Prerequisite or Corequisite: A student has the right to challenge a prerequisite or on the basis of any one, or combination of, these conditions:

1. The prerequisite or corequisite has not been established in accordance with the College's Prerequisite Policy.

2. The prerequisite or corequisite is in violation of Title 5 (California Code of Regulations).

3. The prerequisite or corequisite is unlawfully discriminatory or is applied in an unlawfully discriminatory manner.

4. The student has the knowledge or ability to succeed in the course or program despite not meeting the prerequisite or corequisite.

5. The prerequisite or corequisite course has not been made reasonably available.

6. The student seeks to enroll in a course which involves intercollegiate competition or public performance and if denied admittance, he or she would be delayed by a semester or more in attaining his or her degree or certificate.

7. The student seeks to enroll in a course which has a prerequisite established to protect health and safety, and the student demonstrates that he or she does not pose a threat to himself or herself or to others.

A student should contact either the Counseling Division or the appropriate academic division office to obtain procedures and forms for filing a challenge.

Course Credit Codes

A "Credit, degree applicable" course is a course which has been designated as appropriate to the associate degree in accordance with the requirements of Title 5, Section 55002.

A "Credit, not degree applicable" course is a college course for which credit is granted but is not applicable to the associate degree.

A "Non-credit course" meets particular needs of a student but carries no college credit.

Course Transferability

The course transferability notation indicates if the course is transferable to the CSU and/or UC systems. For example, "Transfer CSU, UC" means a course is acceptable for admission eligibility purposes as a general education requirement or major requirement or for elective credit by the California State University and the University of California systems. If followed by an asterisk (UC*), there is a unit limitation on transferability. For details, see a counselor, the Transfer Center advisor or the articulation officer.

Students planning to transfer to a college or university should consult the transfer curriculum guide sheets available in the Counseling Services Center, visit the Transfer Center, and view ASSIST.

El Camino College has arranged transferability of courses through articulation agreements with various private colleges and universities. For details, see a counselor, the Transfer Center advisor or the articulation officer.

ASSIST

(Articulation System Stimulating Interinstitutional Student Transfer)

ASSIST is a computerized student-transfer information system that can be accessed over the World Wide Web. It displays reports of how course credits earned at one California college or university can be applied when transferred to another. ASSIST is the official repository of articulation for California's public colleges and universities and therefore the most accurate and up-to-date information available about student transfer in California. For additional information regarding ASSIST, visit the Career and Transfer Center or the ASSIST Web site at www.assist.org.

Academic Strategies

Academic Strategies 1abcd
Individualized Academic Strategies
1 unit; 3 hours lab to be arranged
Credit, not degree applicable
This laboratory course emphasizes self-paced individualized instruction based on computerized diagnoses of difficulties in reading and/or mathematical computation. After diagnoses, individualized instructor-led and computer-based interventions are offered to improve reading or math skills.
Note: Pass/no pass only.

Academic Strategies 20ab
Prewriting Workshop
2 units; 2 hours lecture
Credit, not degree applicable
This course has two goals: to break the negative psychological barriers to writing and to develop an understanding of writing as a process that includes prewriting as its most important step.
Note: Pass/no pass only.

Academic Strategies 22ab
Vocabulary Building for College Students
2 units; 2 hours lecture
Credit, not degree applicable
This course is designed to increase the student's reading, listening, writing, and speaking vocabularies by introducing words and concepts that are essential to academic success. A systematic method for continued vocabulary development is emphasized.
Note: Pass/no pass only.

Academic Strategies 23ab
Spelling Techniques
2 units; 2 hours lecture
Credit, not degree applicable
This course is designed for adult learners to identify personal spelling problems and to provide practice of diverse spelling techniques for college level writing.
Note: Pass/no pass only.

Academic Strategies 25ab
Thinking Skills for College Courses
2 units; 2 hours lecture
Credit, not degree applicable
This class is designed to teach students how to analyze information, evaluate statistics, identify patterns, simple analogies and draw logical conclusions with precision and thoroughness.
Note: Pass/no pass only.

Academic Strategies 30ab
Test-Taking Strategies
2 units; 2 hours lecture
Credit, not degree applicable
In this course, examine how testing instruments (such as true/false, multiple choice, and essay questions) are structured. Students learn techniques designed to increase success on various types of achievement tests.
Note: Pass/no pass only.

Academic Strategies 31ab
Study Techniques
2 units; 2 hours lecture
Credit, not degree applicable
Designed to assist the student in acquiring competency in textbook study techniques and in developing an organized system of time and study management.
Note: Pass/no pass only.

Academic Strategies 33ab
Memory Techniques
2 units; 2 hours lecture
Credit, not degree applicable
A course designed to introduce the student to the known methods of memory improvement, and provide practice in the techniques and their application to individual learning situations.
Note: Pass/no pass only.

Academic Strategies 35ab
Listening and Notetaking Strategies
2 units; 2 hours lecture
Credit, not degree applicable
Designed for the student who needs to improve listening comprehension skills, determine main concepts in lectures, to learn different methods of notetaking for specific courses and tests, and to organize notes into meaningful categories and relate them to course assignments.
Note: Pass/no pass only.

Academic Strategies 36ab
Sentence Errors and Punctuation
2 units; 2 hours lecture
Credit, not degree applicable
This course is designed to clear up the most common and troublesome sentence structure errors and teach correct use of punctuation.
Note: Pass/no pass only.

The hours per week of courses may be adjusted based on the length of the term.

Academic Strategies 40ab
Mathematics Anxiety Workshop
2 units; 2 hours lecture
Credit, not degree applicable
This is a course designed to help students understand mathematics anxiety as well as provide an opportunity to discuss its myths and realities, and to improve one's ability to be successful in a mathematics course. Strategies, techniques and activities will be offered which enable students to overcome the barriers impeding their success in mathematics.
Note: Pass/no pass only.

Academic Strategies 50
Special Topics in Academic Strategies
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Academic Strategies more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Academic Strategies 60
Strategies for Success in Distance Education
1 unit; 1 hour lecture
Credit, not degree applicable
The goal of this course is to prepare students for taking distance education classes. This course covers the basics of taking an interactive, asynchronous distance education course via the Internet or other computer and instructional television based systems. Use of e-mail, online class interactions such as groups, World Wide Web access, equipment needs and differences between online and onsite courses will be covered.

Academic Strategies 100
Supervised Tutoring: Academic Skills Development
0 units; 72 maximum hours lab per semester
Enrollment Limitation: referral by instructor or counselor based on assessed academic need
Non-credit
This course provides students with supervised tutoring related to their classroom assignments. This tutoring course covers the application of learning skills, use of learning resources, and review of course content.
Note: This course is repeatable and open for enrollment at registration and at anytime during the semester.

Accounting

See Business

Administration of Justice

Administration of Justice 15
Introduction to Vice and Narcotics Investigation
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course is an introduction to the problems in the areas of drugs and vice. The course will describe various types of drugs and their effects. The elements of vice under California codes including illegal gambling, prostitution, and narcotics will be covered. The roles of law enforcement and other social agencies in dealing with problems of drugs and vice are presented.

Administration of Justice 48
Laws of Arrest - Penal Code 832
2 units; 2.25 hours lecture
Recommended Preparation: eligibility for English 84
Credit, not degree applicable
This course is designed to meet the minimum requirements for training as required under Penal Code Section 832. The course is certified by the California Commission of Peace Officer Standards and Training (P.O.S.T.) and will provide the student with basic fundamentals of the laws of arrest.
Note: Letter grade or pass/no pass option.
Note: Students who have earned credit in Administration of Justice 49 cannot receive unit credit for Administration of Justice 48.

Administration of Justice – A.A. Degree and Certificates of Achievement and Accomplishment

(Industry and Technology Division)

The administration of justice degree or certificate prepares students for a career in criminal justice. By completing the degree or certificate requirements, the student will gain the ability to apply principles of the justice system, constitutional and procedural considerations affecting arrest, search and seizure, human relations, and concepts of criminal law as well as demonstrate proficiency in report writing and record keeping. Competencies will be assessed regularly in accordance with the California Commission on Peace Officers Standards and Training (P.O.S.T.) criteria.

Administration of Justice 100 is required of all pre-employment Administration of Justice students pursuing an Associate of Science degree or seeking immediate employment. AJ 100 is not required of the employed officer or of the student enrolling in a specialized course within the 100-200 series. All students enrolled in this major should be aware of the physical requirements for employment in the law enforcement area.

The pre-employment student should secure a complete physical examination from a licensed physician, preferably one who specializes in examination for law enforcement agencies. The applicant failing a medical examination should consult with instructors before applying for employment with a police agency.

El Camino College Major Requirements
At least 50% of the major requirements for the Associate in Arts degree must be completed at El Camino College.
Administration of Justice 100, 103, 115, 130, 131, 135, 170; plus a minimum of six units from the following: Administration of Justice 70, 95/96abcd (2-4 units), 107, 109, 111, 125, 126, 132, 133, 134, 136, 150, 155
Total Units: 27-32

Certificates of Achievement
A Certificate of Achievement will be granted to the student completing the courses in the Administration of Justice or Reserve Police Officer Academy options. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.
Administration of Justice Option:
Administration of Justice 100, 103, 115, 130, 131, 135, 170; plus a minimum of six units from the following: Administration of Justice 70, 95/96abcd (2-4 units), 107, 109, 111, 125, 126, 132, 133, 134, 136, 150, 155
Total Units: 27-32
Reserve Police Officer Academy Option (pending approval by the California Community College Systen Office): Administration of Justice 150, 155
Total Units: 19

Certificate of Accomplishment
A Certificate of Acomplishment will be granted to the student completing the courses in the Security Officer option. At least 50% of the courses required for the Certificate of Accomplishment must be completed at El Camino College.
Security Officer Option:
Administration of Justice 70, 115, 135, 140, Computer Information Systems 13
Total Units: 14

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Administration of Justice 49
Laws of Arrest and Firearms - Penal Code 832

3 units; 2.5 hours lecture, 1.5 hours lab to be arranged
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU

This class is designed to meet the minimum requirements for training as required by Penal Code Section 832 and certified by the California Commission on Peace Officer Standards and Training (P.O.S.T.). The course is certified by P.O.S.T. in the areas of laws of arrest and ethical use of force, arrest methods and control, and firearms training. The course has 45 hours of lecture covering the California laws of arrest and firearms, 9 hours of training in arrest methods and control, and 18 hours of training in the use of firearms for a total of 72 hours. The course will cover the basic fundamentals of the laws of arrest, arrest methods and controls, and the basic principles of firearms training which will enhance an individual's ability to meet the state's minimum requirements for employment in a law enforcement or allied agency.

Administration of Justice 50
Special Topics in Administration of Justice

Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course

This course is designed to explore topics in Administration of Justice more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Administration of Justice 59
Drug Recognition

1.5 units; 32 hours lecture (one week course)
Enrollment Limitation: Possession of a California Commission on Peace Officer Standards and Training (P.O.S.T.) Basic certificate or Level 1 or Level 2 Reserve certificate
Credit, not degree applicable

This P.O.S.T. advanced officer course will provide in-depth training in all facets of Section 11550 (Controlled Substances) of the State of California Health and Safety Code.

Note: Pass/no pass only.
Note: This course is repeatable.

Administration of Justice 60
Search Warrants

0.5 unit; 9 hours lecture (one week course)
Enrollment Limitation: Possession of a California Commission on Peace Officer Standards and Training (P.O.S.T.) Basic certificate or Level 1 or Level 2 Reserve certificate
Credit, not degree applicable

This P.O.S.T certified course is designed to teach field personnel and new investigators how to write search warrants and how to complete telephone search warrants.

Note: Pass/no pass only.
Note: This course is repeatable.

Administration of Justice 61
Auto Theft Recognition

0.5 unit; 9 hours lecture (one week course)
Enrollment Limitation: Possession of a California Commission on Peace Officer Standards and Training (P.O.S.T.) Basic certificate or Level 1 or Level 2 Reserve certificate
Credit, not degree applicable

This P.O.S.T certified course is designed for field officers in order to improve their abilities to locate and identify stolen vehicles.

Note: Pass/no pass only.
Note: This course is repeatable.

Administration of Justice 62
Arrest and Control Update

0.5 unit; 9 hours lecture (one week course)
Enrollment Limitation: Possession of a California Commission on Peace Officer Standards and Training (P.O.S.T.) Basic certificate or Level 1 or Level 2 Reserve certificate
Credit, not degree applicable

This P.O.S.T certified course is designed to offer police officers the latest techniques in arrest and control situations. This training includes tactics in weapon retention and use of upper body control holds.

Note: Pass/no pass only.
Note: This course is repeatable.

Administration of Justice 63
Motorcycle Refresher Training

0 units; 8 hours lecture (one week course)
Enrollment Limitation: Possession of a California Commission on Peace Officer Standards and Training (P.O.S.T.) Basic or Level 1 certificate or Level 2 Reserve certificate
Non-credit

This eight hour course is designed to refresh, enhance and develop skills learned in basic motorcycle training. The course is presented in conjunction with and is certified by P.O.S.T.

Note: This course is repeatable.

Administration of Justice 64
Vehicle Code

0.5 unit; 9 hours lecture (one week course)
Enrollment Limitation: Possession of a California Commission on Peace Officer Standards and Training (P.O.S.T.) Basic certificate or Level 1 or Level 2 Reserve certificate
Credit, not degree applicable

This nine hour in-service class is designed to offer police officers the latest information available on the California Vehicle Code.

Note: Pass/no pass only.
Note: This course is repeatable.

Administration of Justice 65
National Crime Information Center (NCIC) and Missing Persons Training

0.5 unit; 9 hours lecture (one week course)
Enrollment Limitation: Possession of a California Commission on Peace Officer Standards and Training (P.O.S.T.) Basic certificate or Level 1 or Level 2 Reserve certificate
Credit, not degree applicable

This course is a P.O.S.T. certified course designed to satisfy NCIC and Missing Person Training requirements.

Note: Pass/no pass only.
Note: This course is repeatable.

Administration of Justice 66
Gang Awareness

0.5 unit; 9 hours lecture (one week course)
Enrollment Limitation: Possession of a California Commission on Peace Officer Standards and Training (P.O.S.T.) Basic certificate or Level 1 or Level 2 Reserve certificate
Credit, not degree applicable

This P.O.S.T. certified course focuses on the preventative aspects of street gangs and enforcement issues from a peace officer's perspective.

Note: Pass/no pass only.
Note: This course is repeatable.

Administration of Justice 67
Continuing Professional Training

0.5 -2 units; 9-36 hours lecture (one week course)
Enrollment Limitation: possession of a P.O.S.T. certificate
Credit, not degree applicable

This course will acquaint law enforcement personnel with current changes in the field of law enforcement. The course content satisfies the Commission of Peace Officer Standards and Training (P.O.S.T.) continuing professional training requirements.

Note: Pass/no pass only.
Note: This course is repeatable.

Administration of Justice 69
Dispatcher Update
0.5 unit; 9 hours lecture (one week course)
Credit, not degree applicable
This P.O.S.T. approved course is designed for, but not limited to, non-probationary police dispatchers and will provide current information on matters which directly affect their work environment.
Note: Pass/no pass only.
Note: This course is repeatable.

Administration of Justice 70
Introduction to Industrial Security
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course students are introduced to the philosophy and legal framework of industrial security operations. The course includes a survey of contemporary practices in areas such as administration, personnel, and physical security.

Administration of Justice 95/96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Administration of Justice field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Administration of Justice 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Administration of Justice with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Administration of Justice not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Administration of Justice projects (60 hours per unit).
Note: Refer to page number 11 of this Catalog for eligibility requirements.

Administration of Justice 100
Introduction to Administration of Justice
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC;
This course is a study of the history and philosophy of administration of justice in America including a survey of law enforcement, the judiciary, and corrections. Topics include crime theory, role expectations, and their interrelationship, punishment and rehabilitation, ethics, education, and training.

Administration of Justice 103
Concepts of Criminal Law I
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
*Transfer CSU, UC**
This course covers the study of historical development, philosophy of law and its application to the administration of justice system. Topics covered include legal research, case law, classifications of crime, crimes against persons and property, and crimes against the state as a social and historical ideology.

Administration of Justice 107
Crime and Control - An Introduction to Corrections
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This is a basic course covering crime, criminal behavior and social attempts at controlling that behavior. Emphasis in this course is placed on traditional types of punishment, as well as rehabilitation, probation, parole, and diversion. This course covers the basic career skills and knowledge required for employment.

Administration of Justice 109
Introduction to Police Patrol Procedures
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course covers the study of the history and development of police patrol. Topics covered include functions of patrol, investigative duties of the field officer, techniques for planning patrol activities, handling complaints and requests for service, field interviews, searches and arrests, civil and domestic disturbances, and the handling of traffic related problems.

Administration of Justice 111
Criminal Investigation
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course is a study of the fundamentals of criminal investigation. Topics covered include the techniques of crime scene search and recording, collection and preservation of physical evidence, modus operandi processes, sources of information, interview and interrogation, and follow-up investigation.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

The hours per week of courses may be adjusted based on the length of the term.

Administration of Justice 115
Community and Human Relations
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course explores the roles of the administration of justice practitioners and their agencies. Through interaction and study, the student will become aware of the interrelationships and role expectations among the various agencies and the public. Principal emphasis will be placed upon the professional image of the system of justice administration and the development of positive relationships between members of the system and the public.

Administration of Justice 125
Traffic Control and Accident Investigation
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course explores highway traffic administration activities, vehicle code enforcement, and the dynamics and techniques of accident investigation. Topics include accident reconstruction, skid/speed analysis, evidence collection, report writing, and testifying in court.

Administration of Justice 126
Juvenile Delinquency and Legal Procedures
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course is a study of juvenile delinquency and the juvenile justice system. Topics covered include theories of juvenile crime causation, economic impact, gangs, juvenile law, and the handling of juvenile offenders as well as social, cultural, and environmental factors. Current social services programs designed for delinquents with emphasis on practical application, probation, and youth authority procedures are also discussed.

Administration of Justice 130
Principles of the Justice System
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course is an in-depth study of the role and responsibilities of each segment within the administration of justice system: law enforcement, judicial, and corrections. A past, present, and future exposure to subsystem procedures from initial entry to final disposition and the relationship each segment maintains with its members and the community will be explored.

Administration of Justice 131
Legal Aspects of Evidence
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course covers the legal aspects of evidence and the constitutional and procedural considerations affecting arrest and search and seizure. Topics covered include types of evidence and rules governing their admissibility, judicial decisions interpreting individual rights, and case studies viewed from a conceptual level.

Administration of Justice 132
Crime Scene Investigation
3 units; 3 hours lecture
Recommended Preparation: Administration of Justice 100
Credit, degree applicable;
Transfer CSU
This course provides students with the basic understanding of Crime Scene Investigation (CSI), the workings of a CSI unit and will present an overview of the relationship that exists between forensic science and law enforcement. The course includes a study of crime scene examination, crime scene documentation, DNA and trace evidence analysis, and evidence collection procedures. Students learn to prepare a case for prosecution and testify in court.

Administration of Justice 133
Fingerprint Classification and Investigation
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course covers the basic principles of fingerprints including lifting, classification, and identification. The history of fingerprints, Henry and Battley systems, and the legal aspects of fingerprints are studied in relation to current practices and procedures.

Administration of Justice 134
Introduction to Crime Analysis
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course is designed to acquaint the student with the techniques necessary to develop basic crime analysis skills needed in today's law enforcement environment. Specifically, it will enable them to analyze data and transform their analysis into a specific and proactive plan to combat a variety of crime related problems. The course will especially benefit those law enforcement professionals, both sworn and civilian, who are integrally involved in a community based policing program focused on responding to a local community's quality of life issues.

Administration of Justice 135
Report Writing
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU
This course presents students with techniques in report writing and record keeping which aid the police officer in making a permanent and coherent record of facts to be used in criminal prosecutions and administrative procedures.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Administration of Justice 136
Ethics in the Justice System

3 units; 3 hours lecture
Recommended Preparation: Administration of Justice 100
Credit, degree applicable
Transfer CSU

This course explores the development of personal and social values, the social role law enforcement faces, and the way the criminal justice system responds to such issues. Topics include individual and organizational value systems, group dynamics, integrity and character in leadership and law enforcement, the dynamics of power versus authority, the impact of ethical choices in the law enforcement environment, and the subsequent effect within the justice system.

Administration of Justice 140
Basic Security Officer Training

2 units; 2 hours lecture
Credit, not degree applicable

This course is a survey of contemporary industrial security including legal implications, standards of conduct, communications, emergency procedures, health and safety, internal and external protection, and record keeping.

Note: Pass/no pass only.

Administration of Justice 150
Peace Officer Training Module - Level III

8 units; 6 hours lecture, 6 hours lab
Enrollment Limitation: 1. Medical examination (for safety and college liability reasons); 2. Students must apply for and receive a California Department of Justice Firearms and Arrest Clearance (Penal Code 13511.5)
Credit, degree applicable
Transfer CSU

This course is designed for California Commission on Peace Officer Standards and Training (P.O.S.T.) certified Training Module - Level III peace officer training candidates. A Level III peace officer may perform specified limited support duties that are not likely to result in physical arrests. The student will participate in a 216 hours course of instruction and training emphasizing basic law enforcement philosophy, procedures, tactics, and techniques. The course is certified pursuant to California Penal Code Section 836.6.

Note: Students who have earned credit in Administration of Justice 155 cannot receive unit credit for Administration of Justice 150.

Administration of Justice 155
Peace Officer Training - Level II Module

11 units; 9.5 hours lecture, 5 hours lab
Prerequisite: Administration of Justice 150 with a minimum grade of C or equivalent
Enrollment Limitation: 1. Current Penal Code 832 (P.C. 832) certification valid within the last three years; 2. Current Cardio Pulmonary Resuscitation (C.P.R.) and First Aid certification; 3. Current Medical examination (valid within 6 months) (for safety and liability reasons); 4. Current California Department of Justice Firearms and Arrest Clearance (Penal Code Section 13511.5) (valid within 6 months).
Credit, degree applicable
Transfer CSU

This course is designed for California Commission on Peace Officer Standards and Training (P.O.S.T.) Certified Training Module - Level II police officer training candidates. A Level II peace officer may perform general law enforcement assignments under immediate supervision of a sworn officer. The student will participate in a 261 hour course of instruction and training emphasizing basic law enforcement philosophy, procedures, tactics, and techniques. The course is certified pursuant to California Penal Code Section 836.6.

Administration of Justice 170
Laws of Arrest, Search and Seizure

3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU

In this course, students examine the history and development of the laws and customs of arrest, search and seizure, and the "Exclusionary Rule." Emphasis is given to the application of these procedures as they relate to law enforcement officers and others in the apprehension of criminals and the procuring of evidence.

Administration of Justice 190
Law Enforcement Explorer Academy

3 units; 2.5 hours lecture, 1.5 hours lab
Enrollment Limitation: Medical examination (current within last 6 months)
Credit, not degree applicable

This course is designed to expose the pre-employment student to the many facets of law enforcement. Instructional activities will emphasize career exploration, law enforcement history and organization, professionalism, teamwork, drill and ceremony, cardiopulmonary resuscitation (CPR), and firearm safety. Upon successful completion of the course, a student will be eligible to become a member of a local Police Department Explorer Post.

Administration of Justice 191
Basic Firearms Training

2 units; 2 hours lecture, 18 hours lab to be arranged
Enrollment Limitation: Department of Justice clearance
Credit, degree applicable
Transfer CSU

This is a course of instruction and practice in the defensive methods used by law enforcement officers in self defense of citizens, or in subduing arrestees. The legal and safety aspects of firearms usage is covered through lecture. Actual training on the range with firearms takes place the last 10 weeks of the course. Students are not required to purchase their own weapons, ammunition, or targets.

Administration of Justice 220
Perishable Skills Training - LEDS/FOS

0.5 unit; 9 hours lecture (one week course)
Enrollment Limitation: possession of a P.O.S.T. Certificate
Credit, not degree applicable

This course provides peace officers instruction in perishable skills, which have been identified by the Commission of Peace Officer Standards and Training (P.O.S.T.) as driving and force options. Student proficiency will be evaluated on Law Enforcement Driving Simulators (LEDS) and Force Options Simulators (FOS).

Note: Pass/no pass only.
Note: This course is repeatable.

Administration of Justice 222
Perishable Skills Training - LEDS/Skid Car

0.5 unit; 9 hours lecture (one week course)
Enrollment Limitation: possession of a P.O.S.T. Certificate
Credit, not degree applicable

This course provides peace officers instruction in perishable skills, which have been identified by the Commission of Peace Officer Standards and Training (P.O.S.T.) as driving and emergency vehicle operation. Student proficiency will be evaluated on Law Enforcement Driving Simulators (LEDS) and a Skid Car platform.

Note: Pass/no pass only.
Note: This course is repeatable.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Administration of Justice 224
Perishable Skills Training - FOS/Defensive Tactics
0.5 unit; 9 hours lecture (one week course)
Enrollment Limitation: possession of a P.O.S.T. Certificate
Credit, not degree applicable
This course provides peace officers instruction in perishable skills, which have been identified by the Commission of Peace Officer Standards and Training (P.O.S.T.) as force options and defensive tactics. Student proficiency will be evaluated based on P.O.S.T. standards of performance and on Force Simulators (FOS).
Note: Pass/no pass only.
Note: This course is repeatable.

Air Conditioning and Refrigeration

Air Conditioning and Refrigeration 5
Electrical Applications
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Air Conditioning and Refrigeration 21 or 22 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
The course focuses on basic electrical theory and training in installing, servicing, trouble-shooting, and operating electrical control systems for air conditioning. Single phase and three phase air conditioning and refrigeration systems are covered in classroom discussions and laboratory assignments.

Air Conditioning and Refrigeration 6
Refrigeration and Air Conditioning Control Systems
4 units; 3 hours lecture; 3 hours lab
Prerequisite: Air Conditioning and Refrigeration 21 or 22 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This course explores control system theory, electrical components, and complex control systems with emphasis on supervisory control systems which employ direct digital, proportional, and integral control modes. Theoretical problems and practical lab experience needed to diagnose electrical problems and safety to make the necessary repairs are emphasized. The course provides a foundation in the skills required to analyze and service basic circuits as well as complex analog control circuitry.

Air Conditioning and Refrigeration – A.S. Degree and Certificates of Achievement

(Industry and Technology Division)

The air conditioning and refrigeration program prepares students for employment in the field and provides upgrade opportunities for currently employed personnel. By completing the degree or certificate requirements, the student will gain proficiency in service, troubleshooting, and installation of residential, commercial, and industrial heating, air conditioning, and refrigeration systems. Students will learn to read wiring diagram, diagnose control circuits, operate test equipment, and service pneumatic and electronic controls. Competencies will be assessed in accordance with the Environmental Protection Agency certificate criteria. Students completing the program may expect to enter industry as an advanced apprentice or entry-level heating, ventilation, and air conditioning technician.

El Camino College Major Requirements
At least 50% of the major requirements for the Associate in Science Degree must be completed at El Camino College.
Air Conditioning and Refrigeration 5, 6, 21, 22, 23, 25, 27, 30, 31, 32, 34
Recommended electives: Air Conditioning and Refrigeration 95abcd, Computer Information Systems 13, Construction Technology 100, Environmental Technology 100, Technical Mathematics 1
Total Units: 35

Certificates of Achievement
A Certificate of Achievement will be granted to the student completing the courses in the Air Conditioning or Air Conditioning and Refrigeration Electric Controls or Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration or Refrigeration options. At least 50% of the courses for the Certificate of Achievement must be completed at El Camino College.
Air Conditioning Option (pending approval by the California Community Colleges System Office): Air Conditioning and Refrigeration 5, 21, 25, 27, 34
Total Units: 17
Air Conditioning and Refrigeration Electric Controls Option (pending approval by the California Community Colleges System Office): Air Conditioning and Refrigeration 5, 6, 30, 31, 32, 34
Total Units: 15
Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Option: Air Conditioning and Refrigeration 5, 6, 21, 22, 23, 25, 27, 30, 31, 32, 34,
Technical Mathematics 1
Total Units: 38
Refrigeration Option: (pending approval by the California Community Colleges System Office): Air Conditioning and Refrigeration 6, 22, 23, 34
Total Units: 13

Air Conditioning and Refrigeration 21
Air Conditioning Fundamentals
4 units; 3 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU
This course is designed to introduce students to air conditioning and refrigeration theory and provide an overview of the skills needed for employment in the industry. Topics introduced include safety, air conditioning system operation and components, brazing, electrical applications, service tools, and equipment. Laboratory projects and exercises related to lectures and demonstrations will be assigned.

Air Conditioning and Refrigeration 22
Basic Refrigeration
4 units; 3 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU
In this course students are provided basic instruction in refrigeration covering the principles and their application to domestic and commercial refrigeration systems. Soldering and brazing copper to copper and copper to steel with air-acetylene and oxygen-acetylene methods, use of hand tools, electric meters, and test equipment are included.

Air Conditioning and Refrigeration 23

Commercial Refrigeration Applications

4 units; 3 hours lecture, 3 hours lab
Prerequisite: Air Conditioning and Refrigeration 21 or 22 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU

This course covers the study of repair, adjustment, testing and rebuilding of commercial refrigeration and ice machines. Commercial system servicing problems and control devices are studied as related to freezing and cooling applications.

Air Conditioning and Refrigeration 25

Residential Air Conditioning

4 units; 3 hours lecture, 3 hours lab
Prerequisite: Air Conditioning and Refrigeration 21 or 22 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU

This course covers the fundamentals of cooling, heating and ventilation for residential air conditioning systems. Lab activity includes the use of air conditioning test equipment, installation, repair and maintenance of various types of air conditioning systems. Students will learn various techniques of troubleshooting electrical and mechanical problems.

Air Conditioning and Refrigeration 27

Heating Technologies

4 units; 3 hours lecture, 3 hours lab
Prerequisite: Air Conditioning and Refrigeration 21 or 22 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU

This course covers the principles of gas, electric, radiant and boiler operated heating systems. Classroom discussions focus on maintenance, repair and service techniques for furnaces, steam and hot water boilers. Laboratory exercises emphasize the use of test instruments and safety controls.

Air Conditioning and Refrigeration 30

Electric Controls

2 units; 1.5 hours lecture, 1.5 hours lab
Prerequisite: Air Conditioning and Refrigeration 21 or 22 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU

This course covers electrical components and circuitry for single zone air conditioning controls. Theoretical principles and practical lab experience needed to diagnose electrical problems and safely make necessary repairs are emphasized. The course provides a broad foundation in the skills required to analyze and service basic circuits to the more complex analog single zone control circuitry.

Air Conditioning and Refrigeration 31

HVAC Electronics

2 units; 1.5 hours lecture, 1.5 hours lab
Prerequisite: Air Conditioning and Refrigeration 21 or 22 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU

In this course, students learn the fundamentals of electronic controls used in heating, ventilating, and air conditioning (HVAC) systems. The topics covered include basic electronic system components, single function electronic controls, variable air volume (VAV) systems, variable speed motors, and programmable logic controller (PLC) operation and application.

Air Conditioning and Refrigeration 32

Fundamentals of Pneumatic Controls

2 units; 1.5 hours lecture, 1.5 hours lab
Prerequisite: Air Conditioning and Refrigeration 1 or 21 or 22 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU

This course covers the study of basic fundamentals of pneumatic control heating, ventilating and air conditioning systems. Lecture and laboratory material will include types of control systems, installation, calibration and maintenance.

Air Conditioning and Refrigeration 34

HVAC Customer Service

1 unit; 1 hour lecture
Credit, degree applicable
Transfer CSU

This is a course in heating, ventilation, and air conditioning (HVAC) customer service. Topics covered include communication skills, problem solving, and quality service attitude. Students will learn vital workplace skills through designed exercises as well as how employers evaluate these skills in their employees.

Air Conditioning and Refrigeration 50

Special Topics in Air Conditioning and Refrigeration

Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course

This course is designed to explore topics in Air Conditioning and Refrigeration more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Air Conditioning and Refrigeration 95abcd

Cooperative Work Experience Education

2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply

Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Air Conditioning and Refrigeration field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.

Note: The total units earned for CWEE may not exceed 16 units.

Air Conditioning and Refrigeration 99abc
Independent Study
3 units; hours to be arranged
Enrollment Limitation: two courses in Air Conditioning and Refrigeration with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Air Conditioning and Refrigeration not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Air Conditioning and Refrigeration projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

American Studies

American Studies 7
History of American Popular Culture
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This interdisciplinary course examines how popular culture contributes to the search for meaning in everyday American life. Various forms of popular culture including music, film, television, advertising, sports, fashion, design, toys, magazines, comic books, and cyber culture will be analyzed. Students will assess how American popular culture reveals historical forces at work that influence our lives.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Anatomy

Anatomy 30
Essentials of Anatomy and Physiology
4 units; 2 hours lecture, 6 hours lab
Recommended Preparation: English 84
Credit, degree applicable
*Transfer CSU, UC**
This course is a comparative study of anatomy and physiology in the human and other vertebrate animals such as a fetal pig, cat, or frog. Students will perform dissections of a vertebrate animal, sheep brains, sheep hearts, and cows' eyes. The structure and function of the organ systems of humans and the similarity to other vertebrate animals are discussed. Laboratory experiments are performed by students to reinforce principles of anatomy discussed in lecture. In addition, the basic principles of chemistry, cell biology, histology, embryology, and genetics will be addressed.
Note: This course is designed primarily for non-professional majors but may meet the anatomy requirements for two-year RN programs and some other health related programs. This course is not designed to meet the requirements for the Bachelor of Science in nursing and other pre-professional programs.
**Note: The maximum UC credit allowed for students completing Anatomy 30, Anatomy 32, and Physiology 31 is two courses.*

Anatomy 32
General Human Anatomy
4 units; 2 hours lecture, 6 hours lab
Recommended Preparation: Anatomy 30 or Biology 10 or Biology 1A; English 84
Credit, degree applicable
Transfer CSU, UC;*
This in-depth course covers all eleven systems of the human body including related histology and pathology. The systems covered are skeletal, muscular, nervous, integument, respiratory, digestive, reproductive, urinary, endocrine, immune, and lymphatic. Models of the human body and dissection of higher vertebrates are emphasized in laboratory. This course is designed for science, health-related, pre-nursing (Bachelor of Science in nursing), and pre-professional majors.
**Note: The maximum UC credit allowed for students completing Anatomy 30, Anatomy 32, and Physiology 31 is two courses.*

Anatomy and Physiology 34A
Anatomy and Physiology I
4 units; 3 hours lecture, 5 hours lab
Prerequisite: Chemistry 4, Chemistry 20, or Chemistry 21A with a minimum grade of C or equivalent or concurrent enrollment
Credit, degree applicable
Transfer CSU
This is the first semester of the two-semester Anatomy and Physiology lecture and lab course. It is an in-depth course examining major organ systems, their morphology and functions as well as some of their common pathologies. Topics include an introduction to the human body, chemical and biochemical principles, cell morphology and function, cell division, genetics and histology. In the first semester, the students study the integumentary, skeletal, and muscular systems, as well as the first half of the nervous system. Laboratory investigations include models of the human body and dissection of higher vertebrates, in addition to physiological experiments. The course is designed for science, health-related, prenursing (Bachelor of Science in Nursing), and pre-professional majors.

Anatomy and Physiology 34B
Anatomy and Physiology II
4 units; 3 hours lecture, 5 hours lab
Prerequisite: Anatomy and Physiology 34A
Credit, degree applicable
Transfer CSU
This is the second semester of the two-semester Anatomy and Physiology lecture and lab course. Topics examined include: special senses, autonomic nervous system, endocrine system, cardiovascular system, lymphatic system and immunity, respiratory system, digestive system and nutrition, cellular respiration, urinary system, fluid, electrolyte, and acid-base balance, reproductive system, genetic conditions and disorders, embryology and development. Laboratory investigations include models of the human body and dissection of higher vertebrates, in addition to physiological experiments. The course is designed for science, health-related, pre-nursing (Bachelor of Science in Nursing), and pre-professional majors.

Anthropology – A.A. Degree

(Behavioral and Social Sciences Division)

The anthropology program provides a foundation in the fields of socio-cultural anthropology, biological anthropology, and archeology as they relate to the physical and behavioral aspects of the world's populations of the past and the present. Students in this program will be able to discern the basic issues facing anthropologists, apply the methodologies that anthropologists use to approach the problems in the field, and critically evaluate the record of past accomplishments. This major prepares students for career opportunities in museums, educational, archeological and medical institutions, international development consulting organizations, social welfare, and state and national management entities. Competencies will be assessed regularly through examinations and projects.

El Camino College Major Requirements
Anthropology 1, 2, 3; four courses from: Anthropology 4, 6, 7, 8, 9, 10, 11, 20A, 20B, History 9
Total Units: 21

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Anthropology

Anthropology 1
Introduction to Physical Anthropology
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC;
This course explores and emphasizes the evolution and physical diversity of the human species. Topics include genetics, mechanisms of evolutionary change, human variation, and the reconstruction of human evolutionary history through examination of the fossil record and comparative studies of the living non-human primates.

Anthropology 2
Introduction to Cultural Anthropology
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC;
This course will provide students with an introduction to anthropological theory as well as a cross-cultural understanding of human behavior. Emphasis will be placed on subsistence strategies, marriage, kinship, sociopolitical, economic and religious systems along with the effects of cultural change.

Anthropology 3
Introduction to Archaeology
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the history, ideas, issues, and research methodologies within the field of archaeology. Students will be introduced to basic techniques of archaeological data analysis.

Anthropology 4
Language and Culture
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course introduces students to the anthropological study of language and nonverbal human communication. Using a cross-cultural perspective, students will examine the relationship between culture and the ways in which humans communicate. Topics include language structure, acquisition, diversity, and change.

The hours per week of courses may be adjusted based on the length of the term.

Anthropology 5
Physical Anthropology Laboratory
1 unit; 3 hours lab
Prerequisite: Anthropology 1 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU, UC
This course uses laboratory exercises and other assignments to explore the primary topics of physical anthropology. Topics will include principles of evolution, human genetics, forensic anthropology, behavior and anatomy of nonhuman primates, human variation, and fossil evidence for human evolution.

Anthropology 6
Native Peoples of North America
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is designed to provide an understanding of the origins, culture areas, and culture characteristics of native peoples north of Mexico. Topics include the prehistory of these aboriginal New World populations, cultural adaptations to various environments, and interactions with nonnatives during and following the period of European expansionism.

Anthropology 7
Native Peoples of South America
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
The course will focus on the study of native peoples of South America, including their prehistory, social, political and religious beliefs. The impact of European contact and resultant adaptations, as well as current life situations of tribal descendants in contemporary society, will also be examined.

Anthropology 8
Ancient Civilizations of the Americas
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU,UC
This course is a survey of ancient Indian cultures of North, Central and South America, including their prehistory, and social, political and religious beliefs. The role which Central America played in the development of pre-Columbian societies will be examined. The impact of European contact and resulting adaptations will be evaluated, as will current life situations of indigenous descendants in contemporary society.

Anthropology 9
Women, Culture, and Society
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a cross-cultural survey of women in various types of societies including band, tribal, chiefdom and state level societies. Topics will include women's roles in subsistence strategies, economics, kinship, marriage and the family, political organization, religion and expressive culture. The changing status of women in diverse cultures will be examined as well as the factors that contribute to these changes. The impact of biology and culture on sex roles will also be evaluated.

Anthropology 10
Medical Anthropology
3 units; 3 hours lecture
Recommended Preparation: English 1A
Credit, degree applicable
Transfer CSU
This course is a cross-cultural survey of healing systems in traditional as well as modern societies. Emphasis will be placed on understanding culture specific perceptions of disease. Topics include healers and healing roles, perceptions of the body, the role of power in the organization of medical institutions, and applied medical anthropology.

Anthropology 11
Anthropology of Magic, Religion, and Witchcraft
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a cross-cultural and evolutionary survey of the supernatural. It includes an examination of magic and witchcraft practices and the different functions they play in various world societies including hunting and gathering groups, tribal level and state level societies. Additionally, religious beliefs, symbolism and ritual are explained from an anthropological perspective.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Anthropology 20A
Introduction to Museum Studies
3 units; 2 hours lecture, 1 hour lab plus 2 hours to be arranged
Recommended Preparation: Anthropology 2
Credit, degree applicable
Transfer CSU
This course examines careers in museums, including curation, conservation, registration, the design of exhibits, collections management and educational programs. Participants in the course will plan, design and install an exhibit in the Anthropology Museum involving two- and three-dimensional artworks, and participate in all aspects of curation.
Note: No background in Anthropology is required.

Anthropology 50
Special Topics in Anthropology
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Anthropology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Anthropology 96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a posititon related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU-limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Anthropology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Anthropology 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Anthropology with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides advanced studies in a subject field of Anthropology not covered in the regular departmental offerings. Regular conferences will be held with the instructor to discuss and coordinate the assigned projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Architecture

Architecture 50
Special Topics in Architecture
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Architecture more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Architecture 96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Architecture field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Architecture – A.S. Degree and Certificate of Achievement

(Industry and Technology Division)

The architecture program prepares students for transfer or for employment in the field. By completing the degree or certificate requirements, the student will gain proficiency in manual and computer aided drafting (CAD) fundamentals, three- dimensional drawing, model making, and structural analysis of buildings. Students will learn to interpret the Uniform Building Code and local planning and zoning ordinances. Competencies will be assessed in accordance with the American Institute of Architects (A.I.A.) certification criteria. Students completing the program may expect to enter industry as an entry-level CAD draftsperson in an architecture firm or transfer to an university architecture program.

El Camino College Major Requirements
At least 50% of the major requirements for the Associate in Science Degree must be completed at El Camino College.
Architecture 100, 104, 120abcd*, 150A, 150B, 170, 171, 199ab*; plus four courses from the following: Architecture 121abcd*, 125abcd*, 158, 172, 180 (*one semester of)
Total Units: 35-36

Certificate of Achievement
A Certificate of Achievement will be granted upon completion of the certificate's core requirements and the general requirements. At least 50% of the requirements for the Certificate of Achievement must be completed at El Camino College.
Core Requirements: Architecture 100, 104, 120abcd*, 150A, 150B, 170, 171, 199ab*; plus four courses from the following: Architecture 121abcd*, 125abcd*, 158, 172, 180abcd* (*one semester of)
General Requirements: English A or qualifying score for English 1A on English Placement Test
Total Units: 35-39

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Architecture 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Architecture with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Architecture not covered in the regular departmental offerings. Regular conferences with instructor are coordinated with assigned Architecture projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Architecture 100
An Orientation to Architecture
1 unit; 1 hour lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course is an orientation to architecture for the beginning student. The student will learn how architecture is created and understood as well as how it shapes the social and urban environment. Opportunities for further education and career options will be discussed.

Architecture 104
History of Western Architecture
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
*Transfer CSU, UC**
In this course students are introduced to the architecture of both ancient and recent cultures. Buildings from antiquity to the present day will be studied, analyzed, and interpreted in terms of their religious, social, and political context. Particular emphasis will be placed on the process and sources of design and the purposes and types of buildings.

Architecture 120abcd
Computer Aided Architectural Drafting
3 units; 2 hours lecture, 4 hours lab
Prerequisite: Architecture 150A with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This is a course in the study of Computer Aided Drafting (CAD) with regard to Architecture. Students will produce working drawings using AutoCAD Architectural Desktop Software.

Architecture 121abcd
Three-Dimensional Architectural Computer Aided Design
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Architecture 120abcd with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This is a course in three-dimensional (3-D) computer aided design (CAD) using various CAD software including AutoCAD and Revit. Students will create detailed three dimensional computer models of buildings, generating floor plans, building sections, elevations, details and schedules, as well as computer animations and renderings of 3-D models. Students will use Building Information Modeling (BIM) in design, analysis and documentation of their buildings.

The hours per week of courses may be adjusted based on the length of the term.

Architecture 125abcd
Advanced Three-Dimensional Architectural Computer Aided Design
3 units; 2 hours lecture, 4 hours lab
Prerequisite: Architecture 121abcd with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This advanced course in three-dimensional (3D) computer aided design for architecture uses various CAD software, including Revit Architecture, to teach Building Information Modeling (BIM) techniques. Topics will include computer animation, rendering, design analysis, and documentation of buildings. Students will create detailed computer models of buildings and generate floor plans, building sections, elevations, details and schedules from the model.

Architecture 150A
Architectural Drafting I
3 units; 2 hours lecture, 4 hours lab to be arranged
Credit, degree applicable
Transfer CSU
This course is an introduction to architectural drafting. Line, lettering, sketching, and drawing techniques will be developed. Building codes and zoning codes will be introduced along with the functions of framing members in wood frame construction (Type V). Manual drafting techniques will be used to develop a set of construction documents with an introduction to AutoCAD.

Architecture 150B
Architectural Drafting II
3 units; 2 hours lecture, 4 hours lab to be arranged
Prerequisite: Architecture 150A with a minimum grade of C or equivalent
Recommended Preparation: concurrent enrollment in one semester of Architecture 120abcd
Credit, degree applicable
Transfer CSU
This is an advanced level drafting class covering residential buildings. The student will develop working drawings for a two story residence on a low sloping site. Instruction will stress the construction process, structural detailing and uniform building code requirements for residential Type V construction.

Architecture 158
Structures Analysis - Timber
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU
In this course students are introduced to the analysis of structural components in residential buildings. Topics covered include vertical and horizontal loadings, shear and moment diagrams, wood, laminated wood and steel beams, wood and steel columns, foundation sizing, and lateral bracing systems.

Architecture 170
Architectural Graphic Techniques
3 units; 2 hours lecture, 4 hours lab to be arranged
Credit, degree applicable
Transfer CSU
This introductory course acquaints the student with the range of graphic tools which are available for conveying architectural ideas. Various graphic conventions and techniques will be presented and the rationale behind their use explained.

Architecture 171
Architectural Three-Dimensional Illustration
3 units; 2 hours lecture, 4 hours lab to be arranged
Credit, degree applicable
Transfer CSU
This is a course in three-dimensional pictorial drawing that covers one, two and three point perspective. The most popular methods of construction will be used in producing these drawings. Special attention is given to short-cut methods used by professionals. The use of shade and shadow, reflections and mirror images will also be covered.

Architecture 172
Architectural Color Rendering Techniques
3 units; 2 hours lecture, 4 hours lab to be arranged
Credit, degree applicable
Transfer CSU
This course is a study of the application of the techniques architectural illustrators use to render architectural presentation drawings. The course is taught primarily using design marker and color pencil medium.

Architecture 180abcd
(formerly 180)
Design/Build Studio
4 units; 2 hours lecture, 6 hours lab
Prerequisite: Architecture 150A or Construction Technology 100 or Construction Technology 110 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This course introduces the architectural student to the building design and construction process. Team collaboration will be stressed from the generation of the building design through the fabrication of the structure. Scheduling, budgeting and financing of construction projects will also be covered.

Architecture 199ab
Architectural Design Studio
4 units; 2 hours lecture, 6 hours lab to be arranged
Prerequisite: Architecture 150B, 170 and 171 with a minimum grade of C in prerequisite
Credit, degree applicable
*Transfer CSU, UC**
This course introduces the advanced students to the factors that architects observe when formulating the solution to a problem. Students will design and compose two and three dimensional drawings as well as build models to demonstrate their solutions.
**Note: The maximum UC credit allowed is four units.*

Art

Art 1
Art and Visual Culture in Modern Life
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a global survey of art and visual culture from different historical periods. Students acquire analytical and interpretive skills and develop a basic understanding of the role of art and visual culture in human history.

Art – A.A. Degree and Certificates of Achievement

(Fine Arts Division)

The degree or certificates provide students with a comprehensive foundation in the history, theory, and practice of art. Each student acquires observational, compositional, technical, interpretative, and expressive competency through participation in an extensive range of studio art courses. Exposure to a culturally diverse art history curriculum prepares each student to analyze, assess, and discuss works of art from a variety of historical and style periods. Proficiencies are demonstrated through class projects, critiques, research papers, essays, and objective tests. Program assessment is measured by portfolios, juried and public exhibitions, program completion, transferability, and periodic program reviews. Students qualify to pursue a variety of art-related careers and advanced degree options.

El Camino College Major Requirements

Art – Art History Option: Art 10ab, 31abcd, 37ab (Only one semester of a course will be credited toward the major requirements.); 15 units from: Art 2, 3, 4, 5A, 5B, 6, 7, 9, 34ab (only one semester of), 108; 2-3 units from: Art 11abcd, 17ab, 18abcd, 19ab, 20abcd, 22ab, 23abcd, 29ab, 38abcd, 39ab, 40abcd, 41ab, 42abcd, 52abcd, 53ab, 54abcd, 61ab, 62abcd, 63abcd, 73ab, 74abcd, 75abcd, 81ab, 82abcd, 83abcd, 87ab, 88abcd, 89abcd, 141abcd, 142abcd, 143abcd, 144abcd, 145abcd, 146abcd, 147abcd, 151ab, Photography 51 (Only one semester of a course will be credited toward the major requirements.)
Note: Most transfer colleges will also require a foreign language for a B.A. degree in Art History.
Total Units: 26-28

Art – Studio Art Option: Art 10ab, 31abcd, 37ab, (Only one semester of a course will be credited toward the major requirements.); 6 units from: Art 2, 3, 4, 5A, 5B, 6, 7, 9, 108; 12 units from: Art 11abcd, 17ab, 18abcd, 19ab, 20abcd, 22ab, 23abcd, 24ab, 25abcd, 29ab, 34ab, 38abcd, 39ab, 40abcd, 41ab, 42abcd, 52abcd, 53ab, 54abcd, 61ab, 62abcd, 63abcd, 73ab, 74abcd, 75abcd, 81ab, 82abcd, 83abcd, 87ab, 88abcd, 89abcd, 141abcd, 142abcd, 143abcd, 144abcd, 145abcd, 146abcd, 147abcd, 151ab, Photography 51 (Only one semester of a course will be credited toward the major requirements.)
Total Units: 27

The department recommends that the following subjects be included in a student's program if emphasis in a particular area is desired:
Painting and Drawing: Art 11abcd, 19ab, 20abcd, 22ab, 23abcd, 24ab, 25abcd, 17ab, 18abcd
Printmaking: Art 87ab, 88abcd, 89abcd
Ceramics: Art 61ab, 62abcd, 63abcd
Sculpture: Art 81ab, 82abcd, 83abcd
Jewelry/Metalsmithing: Art 73ab, 74abcd, 75abcd
Design: Art 29ab, 35ab, 36abcd, 141abcd, 142abcd, 143abcd, 144abcd, 145abcd
Graphic Design: Art 29ab, 39ab, 40abcd, 41ab, 42abcd, 44abcd, 52abcd, 53ab, 54abcd, 141abcd, 142abcd, 143abcd, 144abcd, 145abcd, 146abcd, 147abcd
Computer Animation: Art 10ab, 17ab, 141abcd, 142abcd, 144abcd, 147abcd
Digital Illustration: Art 10ab, 37ab, 53ab, 54abcd, 141abcd, 142abcd
Digital Photography: Art 10ab or 37ab; Photography 51, 1, 2 or 23A; Art 141abcd, 142abcd
Graphic Design for Print Publishing: Art 37ab, 39ab, 41ab, 141abcd, 142abcd, 143abcd
Motion Graphics/Visual Effects: Art 37ab, 141abcd, 142abcd, 144abcd, 147abcd, Television and Media Communications 11
Web Design: Art 37ab, 39ab, 141abcd, 142abcd, 145abcd, 146abcd

(Continued on next page)

Art 2History of Western Art - *Prehistoric to Gothic*
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course surveys the history of Western art from prehistoric through Gothic periods with an emphasis on painting, sculpture, and architecture. Key art works are studied in relation to historical and cultural contexts that consider the casual effects of shifting social, political, philosophical, and spiritual paradigms on the production of art.

Art 3
History of Western Art - Proto-Renaissance to 19th Century
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
A study of the history, development, and evolution of painting, sculpture, architecture, and related art forms in Western culture and their integration with changing social, political, religious, and philosophical conditions from the 14th through the 18th centuries. This course, the second in a series of three on the history of Western art, focuses on the Proto-Renaissance (1300-1400), Renaissance (1400-1525), Mannerism (1525-1600), and Baroque (1600-1750) periods in Italy, Spain, Flanders, The Netherlands, France, England, and Germany.

Art 4
History of Western Art - 19th Century to Contemporary Times
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the history, development, and evolution of painting, sculpture, architecture, photography, and related art forms of the 19th, 20th, and 21st centuries. Artworks, art movements, and art styles are studied in relation to relevant social, political, philosophical, and technological factors and the accelerating changes that characterize the modern era.

Art 5A
History of Asian Art - India and Southeast Asia
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course surveys the arts of India and Southeast Asia from their earliest beginnings in Indus Valley cultures through the 18th century with an emphasis on Buddhist and Hindu art forms. Key artworks are studied in relation to historical, cultural, and religious contexts.

Art 5B
History of Asian Art - China, Korea and Japan
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course surveys the arts of China, Japan, and Korea from the Neolithic period through the 21st century in relation to cultural, political, religious, and philosophical contexts. It traces the transmission of cultural ideas and art forms from one civilization to another and considers the effect of Western art's historical methodologies on the study and appreciation of Asian art and culture.

Art 6
Cross-Cultural Art
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course covers the effects of cultural diffusion, cultural pluralism, and globalization on Western civilization as found in modern and contemporary art and popular culture. Topics include Orientalism, Japonisme, and Primitivism as well as Post Modern multiculturalism. Attendance may be required at selected events presented by the El Camino College Center for the Arts and/or art exhibitions presented in the El Camino College Art Gallery.

Art

(Continued from previous page)

Certificate of Achievement – Digital Arts
A Certificate of Achievement will be issued to students completing the required courses in one of these options: Computer Animation, Digital Photography, Graphic Design, Illustration, Motion Graphics, or Web Design. A minimum of 12 units required for the Certificate of Achievement must be completed at El Camino College.
Computer Animation Option: Art 10ab, 37ab, 41ab, 141abcd, 142abcd, 144abcd, 145abcd, 147abcd, 195ab; one course from: Art 150 or Photography 51; two units from: Art 96abcd or 99abc; two courses from: Art 17ab, 31abcd, 82abcd, 146abcd
Total Units: 36-37
Digital Photography Option: Art 10ab, 37ab, 41ab, 141abcd, 142abcd, 195ab, Photography 1, 2, 23A, 51; two units from Art 99abc; two courses from: Art 143abcd, 144abcd, 146abcd, 147abcd, Photography 3, 4
Total Units: 38-39
Graphic Design Option: Art 10ab, 37ab, 39ab, 40abcd, 41ab, 141abcd, 142abcd, 143abcd, 146abcd, 195ab; one course from Art 150 or Photography 51; two units from: Art 96abcd or 99abc; one course from: Art 29 or 87ab
Total Units: 36-37
Illustration Option: Art 10ab, 17ab, 37ab, 41ab, 52abcd, 53ab, 54abcd, 141abcd, 142abcd, 195ab; one course from Art 150 or Photography 51; two units from: Art 96abcd or 99abc; one course from: Art 19ab, 22ab, 87ab
Total Units: 36-37
Motion Graphics Option: Art 10ab, 37ab, 41ab, 141abcd, 142abcd, 144abcd, 145abcd, 147abcd, 195ab; one course from Art 150 or Photography 51; two units from: Art 96abcd or 99abc; two courses from: Art 146abcd, Film/Video 20, 22, 28ab
Total Units: 36-37
Web Design Option: Art 10ab, 37ab, 39ab, 41ab, 141abcd, 142abcd, 145abcd, 146abcd, 195ab; one course from: Art 150 or Photography 51; two units from: Art 96abcd or 99abc; two courses from: Art 144abcd, 147abcd, Computer Information Systems 133
Total Units: 36-37

Certificate of Achievement – Gallery Management
A Certificate of Achievement will be granted to the student completing the courses listed below. At least 50% of the units for the certificate must be completed at El Camino College.
Art 29ab, 31abcd, 37ab, 141abcd, (Only one semester of a course will be credited toward the certificate requirement.); two semesters of Art 34ab; 6 units from the following: Art 1, 2, 3, 4, 5A, 5B, 6, 7, 9, 108
Total Units: 26

Certificate of Achievement – Jewelry Design and Fabrication
A Certificate of Achievement will be granted to the student completing the courses listed below. At least 50% of the units for the certificate must be completed at El Camino College.
Art 1, 10ab, 37ab, 73ab, 74abcd, 75abcd (Only one semester of a course will be credited toward the certificate.); Business 24
Total Units: 21

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Art 7
Art History of Mexico and Central and South America
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of art of Pre-Columbian civilizations in Mexico and Central and South America, with emphasis on the development of Mexican art from the Spanish Colonial period through contemporary times.

Art 9
History of African Art
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is an introductory survey of African art in relation to its historical and cultural contexts. It focuses on specific groups and regions with an emphasis on sub-Sahara West and Central Africa, stressing the different roles of the visual arts within each culture.

Art 10ab
Drawing Fundamentals I
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to the techniques, media, and concepts of drawing. Instruction is designed to foster observational, compositional, interpretive, and expressive proficiencies. Representative topics include observation, perception, and the drawing process; contour and line; value, volume, and light theory; composition and pictorial structure; and linear perspective. Also included is an introduction to color theory.

Art 11abcd
Drawing Fundamentals II
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 10ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course provides intermediate instruction in drawing with emphasis on media development, pictorial space, composition and interpretation. Students will also be introduced to experimental and improvisational techniques.

Art 12ab
Perspective Drawing
1 unit; 0.5 hour lecture, 1.5 hours lab
Credit, not degree applicable
This course explores the practical application of the principles and techniques of perspective drawing. Students who enroll in this course will be provided the opportunity to upgrade their current drawing skills, prepare for future study in studio art, and enhance their ability to develop portfolio quality work.

Art 17ab
Life Drawing I
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 10ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course includes drawing from live models with an emphasis on anatomical structure, representation of gestures, foreshortening and proportion.

Art 18abcd
Life Drawing II
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 17ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is a continuation of Art 17ab. Advanced problems in representing the human form are covered, with an increased emphasis on research and innovation.

Art 19ab
Water Color Painting I
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 10ab with minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course introduces the student to the concepts and techniques of watercolor painting with emphasis placed on basic washes, media manipulation, color theory, composition and interpretation.

The hours per week of courses may be adjusted based on the length of the term.

Art 20abcd
Water Color Painting II
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 19ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is a continuation of the concepts and techniques of watercolor painting. Progressively more challenging problems of technique, color, composition, expression and improvisation will be presented.

Art 22ab
Fundamentals of Painting I
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 10ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course introduces instruction in the materials, methods, and techniques of painting. Emphasis is placed on paint manipulation, color mixing, compositional structure, and form translation.

Art 23abcd
Fundamentals of Painting II
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 22ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course provides intermediate instruction in the materials, methods and techniques of painting with an emphasis on developing proficiency in the use of pictorial space, color, composition and interpretation.

Art 24ab
Life Painting I
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 22ab and 17ab with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU, UC
The techniques and concepts of life painting are introduced in this course. Translation and adaptation of live-model poses are explored in the context of the painting process. The functions and application of anatomy, volume, chiaroscuro, color, space, and composition are also covered.

Art 25abcd
Life Painting II
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 24ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is a continuation of the techniques and aesthetic issues introduced in Art 24ab. Emphasis is placed on the interpretation of live-model poses, media manipulation, color, space, composition, and expression.

Art 29ab
Fundamentals of Color
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to the history, theory, and application of color. Students will create various designs, diagrams, and art works. Creative problem-solving in art and design is also emphasized.

Art 31abcd
Three-Dimensional Design
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to the concepts and processes of three-dimensional design. Students will design and construct projects involving linear and architectural models as well as relief and solid forms. Emphasis is placed on creative solutions to design problems using various construction techniques and materials.

Art 34ab
Gallery Management and Artist Career Issues
4 units; 3 hours lecture, 4 hours lab per week to be arranged
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course is a study of the theory, techniques, evaluation and analysis of gallery operations, the production of art exhibits and the discussion of issues related to the development of artists' careers.

Art 37ab
Two-Dimensional Design I
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU, UC
This course introduces the elements and principles of two-dimensional design and provides instruction in the fundamentals of graphic communication including visual perception, color structure, composition, and expression.

Art 38abcd
Two-Dimensional Design II
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 37ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is an expanded study of the elements and principles of two-dimensional design. Special emphasis is placed on pictorial interpretation, conceptual synthesis and graphic purpose. Experimental design strategies will be introduced including variation studies, research and production methods and electronic media applications.

Art 39ab
Advertising Design I
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU
This course presents a fundamental overview of advertising design and stresses creative problem solving. Topics such as marketing, demographic studies, client-agency relationships and American advertising are covered. Through the synthesis and application of design principles and elements, research and layout methods, and production and printing processes, individual projects will be completed representing various types of advertising: magazine, newspaper, broadcast, outdoor, product, and in-store.

Art 40abcd
Advertising Design II
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 39ab with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course is a continuation of Advertising Design I. Emphasis is placed on the development of a strong foundation for visualizing design problems and formulating their solutions as well as the correlation of form with content, function and context. Materials will be prepared for portfolio presentation.

Art 41ab
Lettering and Typography
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU
This course provides a foundation in typography for students interested in graphic design and digital arts. Lettering techniques from calligraphy to digital typesetting will be covered. The use of type in printed publications, advertising, web design, and motion graphics will be explored. Students will create typographic designs for both page and screen layout.

Art 42abcd
Lettering II
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 41ab with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course continues the study of lettering fundamentals. Included is the Roman alphabet and its various categories, families and related fonts. Additional strategies for the formation and utilization of letters in a variety of contexts will be presented along with the strengthening of basic techniques previously taught. Special attention is placed on creative problem solving including self-generated project themes and solutions, inventive production strategies and experimentally-derived aesthetic content. The creation and presentation of a portfolio of art work is also included.

Art 43abcd
Graphic Design
3 units; 2 hours lecture, 4 hours lab
Recommended Preparation: one semester of Art 37ab with a minimum grade of C or equivalent or one semester of Art 141abcd with a minimum grade of C; and eligibility for English 84
Credit, degree applicable
Transfer CSU
This course is an introduction to the concepts and processes of graphic design. Emphasis is placed on the study of graphic design, students' work with computers in raster, vector graphics, and page layout software, as well as with traditional art and design media. Problem-solving skills and the creative design process are emphasized through digital imaging, typography, identify design and page layout.

Art 50
Special Topics in Art
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Art more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Art 52abcd
Rendering
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 10ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course covers the basic methods and techniques of rendering. Emphasis is placed on the use of various art media such as markers, water-based paint, ink, graphite, pastel and colored pencil within an illusory and sharp-focused context. Materials will be prepared for portfolio presentation.

Art 53ab
Illustration I
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 10ab with a minimum grade of C or equivalent
Recommended Preparation: Art 52abcd
Credit, degree applicable
Transfer CSU
This course is an introduction to illustration and stresses the creative interpretation of various subjects, situations and themes within the context of commercial art applications such as advertising, editorial and institutional. Special emphasis is placed on the creation of illustrations from rough concept sketches through finished art work. Production and media processes, color analysis and application, and portfolio development and presentation will be presented.

Art 54abcd
Illustration II
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 53ab with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course is a continuation of the concepts and techniques presented in Illustration I. Increasingly more advanced illustration projects, techniques, concepts and methods will be presented. Emphasis is placed on the development of original concepts, the refinements of techniques and production methods, and the development and presentation of portfolio-quality art work.

Art 61ab
Beginning Ceramics
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU, UC
This course covers the basic methods of hand-building with clay including forming, glazing, and decorating techniques and offers an introduction to wheel-throwing. Also covered is a brief historical and cultural survey of ceramics.

Art 62abcd
Intermediate Ceramics
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 61ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course will explore the basic functional forms, surface decoration, glazing techniques, clays and clay bodies with an emphasis on the use of the potter's wheel. The course will also consider the history of Early American, Far East and Western European ceramics.

Art 63abcd
Advanced Ceramics
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 62abcd with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course includes the study of highfire clays and glazes. The student will continue to explore functional forms and surface enrichment and will experiment with glazing techniques. Kiln loading and the theory of firing will be introduced. A brief history of ceramics will be included.

Art 73ab
Introduction to Jewelry and Metalsmithing
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU
This course is an introduction to the design and technical processes of jewelry and metalsmithing. Construction techniques such as sawing, soldering, forming, casting, and surface embellishment are employed in combination with various metals and stones. Also covered are issues of contemporary aesthetics and their influence on jewelry design and construction.

Art 74abcd
Jewelry Fabrication
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 73ab with a minimum grade of C
Credit, degree applicable
Transfer CSU
This is a course that focuses on intermediate topics in jewelry fabrication, surface embellishment, forming, stone setting and tool making. The student will develop design skills and concepts through individual projects.

The hours per week of courses may be adjusted based on the length of the term.

Art 75abcd
Jewelry Casting
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 73ab with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course covers the casting process as it relates to the field of jewelry. Modelmaking, lost wax casting, and mold making will be introduced. Design skills and concepts will be developed through individual projects.

Art 81ab
Beginning Sculpture
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to the techniques, materials, and concepts of sculpture. Instruction is designed to foster observation, composition, interpretation, and expression. Representative topics include clay modeling, casting, and bas relief. Emphasis is placed on design, form, materials, and process.

Art 82abcd
Life Sculpture
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 17ab with a minimum grade of C
Recommended Preparation: Art 81ab
Credit, degree applicable
Transfer CSU, UC
This course explores the anatomical structure of the human figure through sculptural studies. Students will develop technical and creative skills, including observation, drawing and modeling. Students will work from live models.
Note: This course is offered in the fall semester only.

Art 83abcd
Bronze Casting
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 81ab with a minimum grade of C or one semester of Art 31abcd with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course is an introduction to the aesthetics and processes used in the making of bronze sculpture. Topics covered include the elements of sculptural design, wax formulation and fabrication, the spruing process, the investing of wax patterns, mold making, finishing techniques, and bronze foundry procedures.

Art 87ab
Beginning Printmaking
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 10ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the fundamental processes of printmaking. Instruction includes Relief (woodcut and linoleum), Intaglio (drypoint and etching), and Serigraph (silkscreen) methods of printmaking. This course also includes Lithography, printing in black and white and in color, as well as limited edition printing by hand and by press. A brief historical survey of printmaking is also included.

Art 88abcd
Etching/Relief
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 87ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is a continuation of Intaglio and Relief printing processes and includes potentials of various plate development techniques. The student will be introduced to multicolor prints involving the use of relief, multiple plates, collagraphs and viscosity printing methods.

Art 89abcd
Silkscreen/Lithography
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 87ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is a continuation of Silkscreen and Lithographic printing processes. Emphasis is placed on resist, photographic, multi-technical and multi-color techniques.

Art 96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Art field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Art 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Art with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides special advanced studies in a subject field of Art not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Art projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Art 100
(pending approval by the California Community Colleges System Office)
Supervised Tutoring: Studio Art
0 units; minimum 1 hour lab per semester
Corequisite: enrollment in an El Camino College studio art course
Non-credit
This course provides tutoring related to specialized equipment and skills specific to studio art. Students benefit from access to laboratory facilities beyond regular class time in courses such as design, digital arts, sculpture, ceramics, jewelry/metalsmithing, printmaking, painting, and photography. Through supervised tutorials, students will complete required studio assignments employing technical skills and concepts presented in the corequisite course.
Note: This course is repeatable and open enrollment at registration and at any time during the semester.

Art 108
History of American Art
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit: degree applicable
Transfer CSU, UC
This course is an introductory survey of American Art from its pre-colonial past to the contemporary era with a focus on the social, political, economic, and philosophical conditions that have resulted in a culturally diverse artistic tradition. The contributions and influences of immigrants, Native Americans, African Americans, Asian Americans, Chicano Americans, Latino Americans, and European Americans will be studied in relation to historical contexts.

Art 109
Contemporary Art in World Cultures
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
In this international survey of contemporary art, students study recent works by artists from different geographic regions of the world. Emphasis is placed on artworks that reflect changes to world cultures resulting from globalization and that capture the interconnections among world cultures and individuals from a humanistic perspective. Using a comparative and transnational framework, students identify commonalities and differences in the way diverse cultures and individuals are affected by and respond to global change.

Art 141abcd
Digital Art
3 units; 2 hours lecture, 4 hours lab
Recommended Preparation: one semester of Art 10ab or Art 37ab with a minimum grade of C; eligibility for English 84; working knowledge of the computer and operating system
Credit, degree applicable
Transfer CSU, UC
This course provides students with a foundation in the two basic types of graphics software, vector (drawing) and raster (painting/photography), with a focus on the principles of two-dimensional design. Students will work on a variety of digital projects involving drawing, design, typography, and photographic manipulation.

Art 142abcd
Digital Photography
3 units; 2 hour lecture, 4 hours lab
Prerequisite: one semester of Art 141abcd or Art 151ab with a minimum grade of C in prerequisite
Recommended Preparation: Art 150 or Photography 51
Credit, degree applicable
*Transfer CSU, UC**
This is an intermediate level course in the use of digital equipment and software to create original photo-based artwork. Emphasis is placed on improving technique and developing the aesthetic and conceptual possibilities of the image. Topics include working with digital cameras, various methods of image input and output, organizing and tracking photo files, comparison of file formats, improving and manipulating images, and preparing image files for use in print, web, and multimedia. Digital images are discussed within the broader context of an art historical tradition.
**Note: The maximum UC credit allowed for students completing Art 142abcd is three units.*

Art 143abcd
Digital Design and Publishing
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 141abcd with a minimum grade of C or equivalent experience
Recommended Preparation: Art 41ab
Credit, degree applicable
Transfer CSU
This course is an introduction to the use of the computer in producing visuals and designs for print media. Areas covered include hands-on experience with desktop publishing software, scanning, and printing. Emphasis is placed on art and design concepts of visual organization and effective communication.

Art 144abcd
Three-Dimensional Computer Animation
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 141abcd with a minimum grade of C or equivalent experience
Recommended Preparation: Art 10ab
Credit, degree applicable
Transfer CSU
This course is an introduction to three-dimensional animation concepts and skills using the computer. Students will receive hands-on experience with animation software, digitizing images, and three-dimensional output to video. Emphasis is placed on art and design concepts of expression and communication.

Art 145abcd
Multimedia Design
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 141abcd with a minimum grade of C or equivalent experience
Recommended Preparation: Art 142abcd or Art 144abcd
Credit, degree applicable
Transfer CSU, UC
This course is designed to enable the student to create two-dimensional animation and interactive multimedia for the World Wide Web. Hands-on exercises lead students through screen and interface design, principles of animation, typography, digital imaging, digital sound, and digital video. Various examples of web animation and online interactive media will be discussed. Assignments result in the creation of original Web animations that include interactivity.

Art 146abcd
Designing for the World Wide Web
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 141abcd with a minimum grade of C or equivalent experience
Recommended Preparation: Art 142abcd and either Art 39abcd or Art 143abcd
Credit, degree applicable
Transfer CSU
This course will focus on applying art and design concepts to designing for the World Wide Web. Topics covered will include: a history and survey of the Internet; analysis of selected Web sites; effective use of topography, images, animation and sound in Web design; flow-charting, story boarding, organizing content, and designing an effective interface. Technical issues such as file formats, compression, testing and debugging will also be covered. Students will have hands-on experience with graphics software, Hypertext Mark Up Language (HTML) and Web authoring software to produce their own Web page.

Art 147abcd
Digital Video Design
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Art 141abcd with a minimum grade of C or equivalent experience
Recommended Preparation: Art 142abcd
Credit, degree applicable
Transfer CSU
This course will cover creating digital movies and non-linear editing techniques. Topics covered will include: a history and overview of analog and digital video; analysis of selected commercial and fine art video pieces; use of sound effects and music; effective use of transitions; incorporating still images and text. Technical issues such as file formats, compression options, and hardware requirements will be covered relative to creating projects for output to videotape, multimedia and the World Wide Web. Students will create an original digital video project.

Art 150
The Art of Photography
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of photography as an art form which includes the evolution of photography as art. The course will also cover the aesthetic and cultural impact of photography as art. Also included is an examination of the techniques and methods of traditional and digital photography. Students will learn camera functions and develop their ability to analyze, evaluate, and compose photographs.

Art 151ab
The Art of Photography Digital Laboratory
1 unit; 3 hours lab
Prerequisite: Art 150 or Photography 51 or Film/Video 22 with a minimum grade of C in prerequisite or concurrent enrollment
Credit, degree applicable
Transfer CSU
This course introduces the computer as a tool for manipulating photographic images. Topics include digital image input, scanning, and various types of digital output. Emphasis is placed on the artistic possibilities of the image.

Art 195ab
Portfolio and Career Planning for Artists and Designers
2 units; 2 hours lecture
Credit, degree applicable
Transfer CSU
This course analyzes various sectors of the art and design industry and provides instruction in portfolio planning and resume preparation for specific career areas. Management skills for independent freelance projects will also be covered.

Astronomy

Astronomy 12
Astronomy Laboratory
1 unit; 3 hours lab
Prerequisite: Astronomy 20 or 25 with a minimum grade of C in prerequisite or concurrent enrollment
Credit, degree applicable
*Transfer CSU, UC**
The astronomy laboratory provides students with an introduction to the observation of the sky with telescopes, binoculars, and the unaided eye. The student will become familiar with the principles of set up and operation of telescopes and use them to view the moon, the sun, planets, stars, star clusters, and nebulae. The student will use the principles of astronomy to interpret their observations. Students will also learn to identify the bright stars and major constellations visible in California.
** Note: Students will receive UC credit if Astronomy 12 is taken concurrently with or after Astronomy 20 or 25.*

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Astronomy – A.S. Degree

(Natural Sciences Division)

The degree is designed for students planning to transfer with a major in astronomy. The student will acquire the ability to use problem solving strategies that apply to physical concepts involving mechanics, thermodynamics, sounds, light, electricity and magnetism, and modern physics. Laboratory activities will provide the student with a foundation in measurement and analysis techniques necessary to test, understand and apply physical concepts. Competencies will be assessed by evaluating the student's ability to quantitatively and qualitatively determine the results of physical situations.

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guidesheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Astronomy 13abc
Astronomical Optics
1 unit; 3 hours lab
Recommended Preparation: Astronomy 20 or 25 or equivalent with a grade of B or better; Mathematics 70
Credit, degree applicable
Transfer CSU
In this course, the student will be introduced to principles of astronomical optics. The student will apply those principles to the design, fabrication, and use of a telescope, which will be tested under the night sky. Primary mirrors are ground, smoothed, polished, and figured by hand. Extensive testing is done in the optical shop. Optical and optical testing theories are presented. Students will design and build a custom optical tube assembly for their primary mirror as well as a telescope mount.
Note: Minimum cost for a completed telescope is $250.

Astronomy 20
The Solar System
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to the major planets and the smaller members of the solar system such as moons, asteroids, Kuiper Belt Objects, and comets. Theories of the origin and histories of the planets are presented. The early history of astronomy and the Copernican Revolution are discussed. Sky phenomena such as the constellations, the seasons, eclipses, and planetary motions are demonstrated in the planetarium. The possibility of life elsewhere in the solar system is examined.

Astronomy 25
Stars and Galaxies
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to the universe and its history, from the Big Bang to the emergence of intelligent life on Earth. The course covers the sun, its life history, and its influence on the Earth. The formation, evolution, and fates of different kinds of stars are examined. An overview of the Milky Way Galaxy is presented, leading to a discussion of galaxy types, their clustering and evolution. The course concludes with an examination of cosmology, the study of the birth, structure, and evolution of the universe as a whole. Included is a discussion of the possibility of and the search for extraterrestrial life.

Astronomy 50
Special Topics in Astronomy
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Astronomy more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Astronomy 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Astronomy with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides the student an opportunity to explore research problems in Astronomy not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned laboratory work and/or research projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Automotive Collision Repair/Painting

Automotive Collision Repair/Painting 1A
Introduction to Automotive Collision Repair
8 units; 3 hours lecture, 15 hours lab
Credit, degree applicable
Transfer CSU
The course is designed to introduce students to automotive collision repair and provide an overview of the skills needed for employment in industry. Topics covered include safety practices, industry repair standards, repair theory, vehicle construction, gas welding and brazing, hot shrinking, hammer forging, grinding, metal finishing, body solder, plastic filler, and primer.
Note: The two-course sequence of Automotive Collision Repair/Painting 1A and 1B is the same as 4abcd. Students who have completed two semesters of Automotive Collision Repair/Painting 4abcd will not receive credit for 1A.

Automotive Collision Repair/Painting 1B
Collision Repair Equipment and Welding Techniques
8 units; 3 hours lecture, 15 hours lab
Prerequisite: Automotive Collision Repair/Painting 1A with a minimum grade of C
Credit, degree applicable
Transfer CSU
The course provides instruction on collision repair equipment and welding techniques involving: safety practices, arc and Metal Inert Gas (MIG) welding, resistance welding, vehicle collision analysis and theory, hydraulic jacks, collision repair equipment, and body component alignment principles.
Note: Two-course sequence Automotive Collision Repair/Painting 1A and 1B same as 4abcd.

Automotive Collision Repair/Painting – A.S. Degree and Certificates of Achievement and Accomplishment

(Industry and Technology Division)

The automotive collision repair/painting program prepares students for employment in the field and provides upgrade opportunities for currently employed personnel. By completing the degree requirements, students will gain proficiency in industry repair standards, vehicle identification and construction, estimating, body repairs, frame repairs, vehicle alignment, welding, and vehicle painting. In addition, completing the certificate requirements prepares students for employment in the fields of automotive insurance investigation, vehicle accident reconstruction, automotive collision repair, or automotive painting. Competencies will be assessed regularly by student performance in the automotive collision repair/painting classroom and laboratory.

El Camino College Major Requirements
At least 50% of the major requirements for the Associate in Science Degree must be completed at El Camino College.
A minimum of 20 units from the following: Automotive Collision Repair/Painting 1A, 1B, 1C, 1D, 2A, 2B, 2C, 3A, 4abcd, 5abcd, 20, 22, 24, 26.
Recommended electives: Automotive Collision Repair/Painting 95abcd, Machine Tool Technology 16ab, Technical Mathematics 1, Welding 15ab
Total Units: 20

Certificates of Achievement
A Certificate of Achievement will be granted to the student completing the courses in the Automotive Collision Repair/Painting I or Automotive Collision Repair/Painting II options. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.
Automotive Collision Repair/Painting I Option: Automotive Collision Repair/Painting 1A, 1B, 1C, 1D, 2A, 2B, 2C, 3A, 4abcd, 5abcd, 20, 22, 24, 26
Total Units: 32
Automotive Collision Repair/Painting II Option: Complete a minimum of 32 units from the following: Automotive Collision Repair/Painting 1A, 1B, 1C, 1D, 2A, 2B, 2C, 3A, 4abcd, 5abcd, 20, 22, 24, 26; complete 9-12 units from the following: English A or qualifying score for English 1A on English Placement Test, Machine Tool Technology 16ab,* Technical Mathematics 1, Welding 15ab* (*one semester of)
Total Units: 41-44

Certificates of Accomplishment
A Certificate of Accomplishment will be granted to the student completing the courses in the Automotive Collision Investigation or the Automotive Accident Reconstruction options. At least 50% of the requirements for the Certificate of Accomplishment must be completed at El Camino College.
Automotive Collision Investigation Option: Automotive Collision Repair/Painting 20, 22
Total Units: 6
Automotive Accident Reconstruction Option: Automotive Collision Repair/Painting 24, 26
Total Units: 6

Automotive Collision Repair/Painting 1C
Major Collision Analysis and Repair
8 units; 3 hours lecture, 15 hours lab
Prerequisite: Automotive Collision Repair/Painting 1A with a minimum grade of C
Credit, degree applicable
Transfer CSU
The course provides instruction on major collision analysis and repair involving: safety practices, major collision repair, sectioning, suspensions, front end alignment, estimating and electric welding.

Automotive Collision Repair/Painting 1D
Automotive Component Systems Analysis and Repair
8 units; 3 hours lecture, 15 hours lab
Prerequisite: Automotive Collision Repair/Painting 1A with a minimum grade of C
Credit, degree applicable
Transfer CSU
The course provides instruction on the principles of Automotive Collision Repair/Painting involving: safety practices, window glass, plastics, vinyl tops, electric circuits, cooling systems, air conditioning, upholstery and electric welding.

Automotive Collision Repair/Painting 2A
Basic Automotive Painting - Refinishing
8 units; 3 hours lecture, 15 hours lab
Credit, degree applicable
Transfer CSU
In this course students are introduced to automotive painting and refinishing and the skills needed for employment in industry. Topics covered include safety practices, industry repair standards, VOC (Volatile Organic Compound) recording, surface identification, surface preparation, abrasives, metal conditioning, vehicle masking, primers, and spray equipment.
Note: The two-course sequence of Automotive Collision Repair/Painting 2A and 2B is the same as Automotive Collision Repair/Painting 5abcd.

Automotive Collision Repair/Painting 2B
Automotive Refinishing Materials and Equipment
8 units; 3 hours lecture, 15 hours lab
Prerequisite: Automotive Collision Repair/Painting 1A or 2A or one semester of 4abcd or 5abcd with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This course provides instruction on the principles of automotive refinishing involving safety practices and equipment, air supply equipment, refinishing spray booth, spray equipment, undercoat materials, solvents, top coat color systems, and paint application procedures.
Note: The two-course sequence of Automotive Collision Repair/Painting 2A and 2B is the same as Automotive Collision Repair/Painting 5abcd.

Automotive Collision Repair/Painting 2C
Automotive Refinishing Applications
8 units; 3 hours lecture, 15 hours lab
Prerequisite: Automotive Collision Repair/Painting 1A or 2A or one semester of 4abcd or 5abcd with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This course provides instruction on principles of automotive refinishing involving safety practices, estimating, paint additives, paint removal, plastic component refinishing, spot repair, color sanding and buffing, multi-stage finishes, and paint accessories.

Automotive Collision Repair/Painting 3A
Introduction to Automotive Collision Estimating
1 unit; 1 hour lecture
Recommended Preparation: Automotive Collision Repair/Painting 1A or 2A or one semester of 4abcd or 5abcd or equivalent; eligibility for English 84
Credit, degree applicable
Transfer CSU
This course provides instruction on the theory and application of developing a written damage estimate using forms, books, guides and charts.

Automotive Collision Repair/Painting 4abcd
Automotive Collision Repair: Collision Damage
4 units; 2 hours lecture, 7 hours lab
Credit, degree applicable
Transfer CSU
This course provides instruction on the principles of automotive collision repair/painting involving safety practices, oxy-acetylene welding and brazing, electric welding, vehicle construction, metal working, grinding, plastic and solder filling, hydraulic body jacks, structural repairs, masking, and primer and spot painting.
Note: Four semesters of this course are the same as the two-course sequence of Automotive Collision Repair/Painting 1A and 1B.

Automotive Collision Repair/Painting 5abcd
Automotive Collision Repair: Painting
4 units; 2 hours lecture, 7 hours lab
Credit, degree applicable
Transfer CSU
This course provides instruction on the principles of automotive collision repair/painting involving safety practices, oxy-acetylene welding and brazing, plastic and solder filling, vehicle construction and identification, plastic parts, estimating, surface preparation, vehicle masking, primer, paint removal, paint additives, painting equipment, spot painting and complete refinishing.
Note: Four semesters of this course are the same as the two-course sequence of Automotive Collision Repair/Painting 2A and 2B.

The hours per week of courses may be adjusted based on the length of the term.

Automotive Collision Repair/Painting 6abcd
Automotive Collision Repair Applications
3 units; 6 hours lecture, 10 hours lab (6 weeks course)
Credit, degree applicable
Transfer CSU
This course provides instruction on the principles of automotive collision repair and painting involving: safety practices, vehicle construction gas and Metal Inert Gas (MIG) welding, sheet metal repair, High Volume Low Pressure (HVLP) guns, undercoat materials and complete painting.

Automotive Collision Repair/Painting 20
Automotive Collision Investigation
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU
This is an introductory course in automotive collision investigation designed for students preparing for employment in the fields of automotive collision repair, automotive insurance investigation, and accident reconstruction. Emphasis is placed upon vehicle identification, vehicle design and construction, occupant restraint systems, tire identification and construction, identification of skid-marks, the coefficient of friction, and speed from skid formulas.

Automotive Collision Repair/Painting 22
Automotive Repair Fraud 3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU
This course covers the elements of fraud encountered in the automotive repair industry and is designed to prepare students for employment in the fields of automotive collision repair, automotive insurance investigation, and accident reconstruction. Topics covered include staged traffic accidents, Vehicle Identification Number (VIN) swapping, title washing, VIN cloning, National Highway Traffic Safety Administration (NHTSA), Federal Motor Vehicle Safety Standards, National Insurance Crime Bureau (NICB), automotive insurance industry, fraud detection and investigation procedures, collection of evidence, witness marks and material transfer, identification and implications of prior damage, vehicle crush analysis, traffic accident photography, vehicle lamp analysis, and vehicle fires.

Automotive Collision Repair/Painting 24
Automotive Collision Analysis 3 units; 3 hours lecture Recommended Preparation: Automotive Collision Repair/Painting 20
Credit, degree applicable
Transfer CSU
This course covers the elements of automotive collision analysis and is designed to prepare students for employment in the fields of automotive collision repair, automotive insurance investigation, and accident reconstruction. Emphasis is placed on accident causation factors, collision deformation, low speed impacts, calculation of drag factors, speed determination from crush analysis, Event Data Recorder (EDR), failure analysis, roadway debris, and human factors.

Automotive Collision Repair/Painting 26
Automotive Accident Reconstruction
3 units; 3 hours lecture
Recommended Preparation: Automotive Collision Repair/Painting 20 or 24
Credit, degree applicable
Transfer CSU
This course covers the elements of automotive collision reconstruction and is designed to prepare students for employment in the fields of automotive collision repair, automotive insurance investigation, and accident reconstruction. Emphasis is placed on photography of vehicle damage and computer modeling, measuring and documenting skid marks, calculation of drag factors, speed from skid marks considering radius and critical speed scuff, determination of combined velocities, occupant dynamics, time and position analysis, force line determination and Principle Direction of Force (PDOF), conservation of momentum analysis, and Delta-V determination.

Automotive Collision Repair/Painting 50
Special Topics in Automotive Collision Repair/Painting
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Automotive Collision Repair/Painting more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Automotive Collision Repair/Painting 95abcd

Cooperative Work Experience Education

2-4 units; hours to be arranged

Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.

Credit, degree applicable

Transfer CSU - limitations apply

Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Automotive Collision Repair/Painting field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.

Note: The total units earned for CWEE may not exceed 16 units.

Automotive Collision Repair/Painting 99abc

Independent Study

1-3 units; hours to be arranged

Enrollment Limitation: two courses in Automotive Collision Repair/Painting with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work

Credit, degree applicable

Transfer CSU - limitations apply

This course provides special advanced studies in a subject field of Automotive Collision Repair/Painting not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Automotive Collision Repair/Painting projects (60 hours per unit).

Note: Refer to page 11 of this Catalog for eligibility requirements.

The hours per week of courses may be adjusted based on the length of the term.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Automotive Technology – A.S. Degree and Certificates of Achievement and Accomplishment

(Industry and Technology Division)

The automotive technology program prepares students for employment in the field and provides upgrade opportunities for currently employed personnel. By completing the degree or certificate requirements, the student will gain proficiency in safety practices, automotive service, testing, troubleshooting, brakes, suspension, wheel alignment, engine tune-up, electrical systems, fuel systems (carburetion and fuel injection), emission systems, transmissions, drive trains, engine repair, engine rebuilding, automotive machining, or air conditioning. Competencies will be assessed regularly in accordance with Automotive Service Excellence (ASE) standards. A student completing degree or certificate requirements may expect to enter industry as a technician in automotive service, repair, tune-up, smog certification, or automotive air conditioning.

El Camino College Major Requirements

Complete a minimum of: 8 units from Automotive Technology 22A or 23 and 24; 8 units from Automotive Technology 22B or 25 and 26 (or 8 units from Automotive Technology 71 and 72); 8 units from Automotive Technology 33 or 34 and 35; 8 units from Automotive Technology 11 or 14 and 16; one course from Automotive Technology 41, 42, 43, 45
Recommended electives: Machine Tool Technology 13A; Technology Mathematics 1; Welding 15ab
Total Units: 36-40

Certificates of Achievement

A Certificate of Achievement will be granted to the student completing the courses in the Automotive Brakes/Suspension, Transmission/Drive Train Technician or Automotive Engine Rebuilding/Repair Technician or Automotive Technician I or Automotive Technician II or Automotive Tune-up Technician options. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.

Automotive Brakes/Suspension, Transmission/Drive Train Technician Option (pending approval by the California Community Colleges System Office): Automotive Technology 11 or 14 and 16; Automotive Technology 33 or 34 and 35
Total Units: 16

Automotive Engine Rebuilding/Repair Technician Option (pending approval by the California Community Colleges System Office): Automotive Technology 41 or 42; Automotive Technology 43 or 45
Total Units: 12

Automotive Technician I Option: 8 units from: Automotive Technology 33 or 34 and 35; 8 units from: Automotive Technology 22A or 23 and 24; 8 units from: Automotive Technology 22B or 25 and 26; one course from: Automotive Technology 41, 42, 43, 45; 8 units from: Automotive Technology 11 or 14 and 16
Total Units: 36-40

Automotive Technician II Option 8 units from: Automotive Technology 33 or 34 and 35; 8 units from: Automotive Technology 22A or 23 and 24; 8 units from: Automotive Technology 22B or 25 and 26; one course from: Automotive Technology 41, 42, 43, 45; 8 units from: Automotive Technology 11 or 14 and 16; complete 6-10 units from the following: English A or qualifying score for English 1A on the English Placement Test, Technical Mathematics 1, Welding 15ab* or Machine Tool Technology 46 or Machine Tool Technology 101abcd* (*one semester of)
Total Units: 42-50

Automotive Tune-Up Technician Option (pending approval by the California Community Colleges System Office): Automotive Technology 22A or 23 and 24; Automotive Technology 22B or 25 and 26
Total Units: 16

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Automotive Technology

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Certificates of Accomplishment
A Certificate of Accomplishment will be granted upon completion of the required courses in the Automotive Air Conditioning Technician or Automotive Brakes and Suspension Technician or Automotive Engine Rebuilding and Repair Technician or Automotive Transmission and Drive Train Technician options. At least 50% of the courses required for the Certificate of Accomplishment must be completed at El Camino College.
Automotive Air Conditioning Technician Option: Automotive Technology 81
Total Units: 3
Automotive Brakes and Suspension Technician Option: Automotive Technology 11 or 14 and 16
Total Units: 8
Automotive Engine Rebuilding and Repair Technician Option: Automotive Technology 41 or 42 or 43 and 45
Total Units: 8
Automotive Transmission and Drive Train Technician Option: Automotive Technology 33 or 34 and 35
Total Units: 8

Automotive Technology

Automotive Technology 1
Introduction to Automotive Service
2 units; 2 hours lecture, 2 hours lab
Credit, degree applicable
Transfer CSU
This is an introduction to the study of automotive servicing including engine, ignition, fuel, cooling, charging, cranking, drive line, brakes and suspension systems construction and operational theories. Laboratory activities include maintenance procedures and proper use of tools utilized in the field.

Automotive Technology 11
Brakes, Suspension and Four Wheel Alignment
8 units; 5 hours lecture, 10 hours lab
Recommended Preparation: Automotive Technology 1 or concurrent enrollment or industry experience
Credit, degree applicable
Transfer CSU
This course covers the study of brake systems, front and rear suspension systems, steering systems and their operation. Laboratory activities stress brake, suspension and steering diagnosis, repair, machining, overhaul, front wheel and four wheel alignment procedures and proper use of tools and equipment utilized in the field.
Note: This course is the same as the two-course sequence Automotive Technology 14 and 16. Students who have completed Automotive Technology 14 and 16 will not receive credit for Automotive Technology 11.

Automotive Technology 14
Brakes
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Automotive Technology 1 or concurrent enrollment or testing (qualifying score on the Automotive Placement Test) and assessment
Credit,degree applicable
Transfer CSU
This course covers the study of brake systems including anti-lock (ABS) brake systems and their operation. Laboratory activities stress brake system diagnosis, repair, machining, and overhaul procedures and proper use of tools and equipment utilized in the industry.
Note: Two-course sequence Automotive Technology 14 and 16 same as 11.

Automotive Technology 16
Suspension and Four Wheel Alignment
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Automotive Technology 1 or concurrent enrollment or testing (qualifying score on the Automotive Placement Test) and assessment
Credit, degree applicable
Transfer CSU
This course covers the study of suspension and steering systems construction and their operation. Laboratory activities stress suspension and steering system diagnosis, repair, machining, overhaul, front wheel and four wheel alignment procedures and proper use of tools and equipment utilized in the field.
Note: Two-course sequence Automotive Technology 14 and 16 same as 11.

Automotive Technology 21
Introduction to Engine Tune-up
2 units; 2 hours lecture, 2 hours lab
Recommended Preparation: Automotive Technology 1 or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of minor engine tune-up, electrical systems and fuel systems theory and application. Laboratory activities stress the proper use of test equipment utilized in the industry.

Automotive Technology 22A
Introduction to Tune-Up, Electrical and Fuel Systems
8 units; 5 hours lecture, 10 hours lab
Recommended Preparation: Automotive Technology 1 or equivalent
Credit, degree applicable
Transfer CSU
This is an introductory engine tune-up course which covers construction and operation of the following systems: charging, cooling, emission controls, fuel and ignition. Laboratory activities stress the proper use of test equipment and repair procedures used in the industry.
Note: Same as two-course sequence Automotive Technology 23 and 24. Students who have completed Automotive Technology 23 and 24 will not receive credit for Automotive Technology 22A.

Automotive Technology 22B
Advanced Tune-Up, Electrical and Fuel Systems
8 units; 5 hours lecture, 10 hours lab
Prerequisite: Automotive Technology 22A with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of major tune-up, electrical systems and fuel systems (carburetion and fuel injection) testing, diagnosis and repair procedures. Laboratory activities stress the proper use of test equipment utilized in industry.
Note: Same as two-course sequence Automotive Technology 25 and 26. Students who have completed Automotive Technology 25 and 26 will not receive credit for Automotive Technology 22B.

Automotive Technology 23
Major Tune-Up and Emission Controls
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Automotive Technology 21 or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of major engine tune-up, service and testing emission control systems. Laboratory activities stress the proper use of test equipment utilized in the field.
Note: Two-course sequence Automotive Technology 23 and 24 same as 22A.

Automotive Technology 24
Fuel Systems and Emissions
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Automotive Technology 21 or 23 or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of fuel system service, testing and diagnosis, including carburetor overhaul procedures, fuel injection and computer controlled fuel systems. Laboratory activities stress the proper use of test equipment utilized in the field.
Note: Two-course sequence Automotive Technology 23 and 24 same as 22A.

Automotive Technology 25
Automotive Electrical Systems
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Automotive Technology 21 or 23 or equivalent
Credit, degree applicable
Transfer CSU
This course covers the theory and operation of automotive electronic components and systems. Laboratory activities stress proper use of test equipment utilized in the field.
Note: Two-course sequence Automotive Technology 25 and 26 same as 22B.

Automotive Technology 26
Automotive Testing and Diagnosis
4 units; 3 hours lecture, 3 hours lab
Prerequisite: minimum of 8 units with a minimum grade of C in each prerequisite course from the following courses: Automotive Technology 22A, 23, 24, 25 or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of advanced automotive testing and diagnostic procedures of the following systems: ignition, fuel, emissions, electrical and electronic, and computer control systems. Laboratory activities stress proper use of diagnostic equipment utilized in the field.
Note: Two-course sequence Automotive Technology 25 and 26 same as 22B.

Automotive Technology 33
Transmission, Drive Train and Drive Axles
8 units; 5 hours lecture, 10 hours lab
Recommended Preparation: Automotive Technology 1 or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of automatic transmissions, manual transmissions, clutch, drive line and drive axle construction and operation. Laboratory activities stress drive train diagnosis, repair, overhaul procedures and the proper use of tools utilized in the field.
Note: Same as two-course sequence Automotive Technology 34 and 35. Students who have completed Automotive Technology 34 and 35 will not receive credit for Automotive Technology 33.

Automotive Technology 34
Automatic Transmissions
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Automotive Technology 1 or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of automatic transmission construction and operation. Laboratory activities stress diagnosis, repair, overhaul procedures and the proper use of tools utilized in the field.
Note: Two-course sequence Automotive Technology 34 and 35 same as Automotive Technology 33. Students who have completed Automotive Technology 34 and 35 will not receive credit for Automotive Technology 33.

Automotive Technology 35
Manual Transmission, Drive Train and Drive Axles
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Automotive Technology 1 or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of manual transmission, clutch, drive line and drive axle construction and operation. Laboratory activities stress diagnosis, repair, overhaul procedures and the proper use of tools utilized in the field.
Note: Two-course sequence Automotive Technology 34 and 35 same as Automotive Technology 33. Students who have completed Automotive Technology 34 and 35 will not receive credit for Automotive Technology 33.

The hours per week of courses may be adjusted based on the length of the term.

Automotive Technology 41
Engine Rebuilding
8 units; 5 hours lecture, 10 hours lab
Recommended Preparation: Automotive Technology 1 or equivalent
Credit, degree applicable
Transfer CSU
This course stresses engine construction, operation, diagnosis and the proper rebuilding procedures. Laboratory activities stress the proper use of tools and equipment utilized in the field.

Automotive Technology 42
Engine Repair
8 units; 5 hours lecture, 10 hours lab
Recommended Preparation: Automotive Technology 1 or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of automotive engine construction and operation, diagnosis and repair procedures of the following: cylinder head removal and valve grinding, camshaft and timing gear replacement, water pump replacement, oil, coolant and manifold (intake and exhaust) leaks, engine maintenance and the installation of long or short blocks (no engine rebuilding). Laboratory activities stress the proper use of equipment utilized in the field.

Automotive Technology 43
Introduction to Engine Repair
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Automotive Technology 1 or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of automotive engine construction and operation, diagnosis and repair procedures of the following: cylinder head removal and valve grinding, camshaft and timing gear replacement, water pump replacement, oil coolant and manifold (intake and exhaust) leaks and engine maintenance. Laboratory activities stress the proper use of equipment utilized in the field.

Automotive Technology 45
Automotive Machining
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Automotive Technology 1 or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of the machining processes used in the automotive trade, including but not limited to: drilling and tapping, milling, boring and honing, pin fitting, press work, resurfacing, reaming, knurling, repairing of damaged threads, measuring, grinding, and crack detection methods and repairing. Laboratory activities stress proper use of equipment utilized in the field.

Automotive Technology 50
Special Topics in Automotive Technology
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Automotive Technology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Automotive Technology 80
California Clean Air Car Course
4 units; 4 hours lecture, 1 hour lab
Prerequisite: minimum of 8 units with a minimum grade of C in each prerequisite course from the following: Automotive Technology 21, 22A, 22B, 23, 24, 25 or equivalent trade experience in tune-up
Credit, degree applicable
Transfer CSU
This course covers the study of proper procedures for inspection, testing, repair and certification of vehicle emissions within California Clean Air Car Standards.

Automotive Technology 81
Automotive Air Conditioning
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU
In this course students are introduced to refrigeration principles, system component functions, and proper testing procedures as they apply to automotive air conditioning. The course stresses the analysis of collected data, resulting in accurate diagnosis, repair, and service.

Automotive Technology 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Automotive Technology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Automotive Technology 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Automotive Technology with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Automotive Technology not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Automotive Technology projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Biology

Biology 8
Biology of Plants
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**
This biology course focuses on the world of plants and plant-like organisms. Students will study vascular plant anatomy, physiology, and ecology as well as explore the significance of plants to human life. The laboratory work will include a survey of algae, fungi, and all representative plant groups.

Biology 10
Fundamentals of Biology
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: English 84
Credit, degree applicable
*Transfer CSU, UC**
This course is a survey of all living things: prokaryotes, protists, fungi plants, and animals. Basic principles of structure, function, and relationships of living organisms are discussed with special reference to humans.
**Note: Students will not receive UC credit for Biology 10 if taken after Biology 101.*

Biology 11
Fundamentals of Zoology
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**
This course introduces major animal groups and the single-celled protozoans. Comparative studies of animal structure and physiology will illustrate principles of classification and evolution. Ecological topics include animal behavior, natural history, and relationships of animals to humans. Genetics and basic cell biology are also covered.

The hours per week of courses may be adjusted based on the length of the term.

Biology – A. S. Degree

(Natural Sciences Division)

The program is designed to provide students the opportunity to obtain a degree upon successful completion of the requirements of a biology transfer major. This major may include biology, botany, zoology, microbiology, molecular biology, or anatomy and physiology. The student in this program will master cell anatomy and physiology, molecular and Mendelian genetics, and the anatomy, morphology, physiology, life histories, ecology, and evolutionary aspects of archaebacteria, eubacteria, protist, fungi, and plant and animal kingdoms. Competency will be measured by exams and lab practicum exams, and in the performance of such laboratory skills as dissections, microbiological techniques, microscopy, and electrophoresis.

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Biology 12
Field Zoology
4 units; 2 hours lecture, 6 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course is a survey of invertebrate and vertebrate animals involving general principles of biology, taxonomy, physiology, and ecology with an emphasis on California. Major invertebrate phyla will be introduced in the classroom and through tide pool experience. The taxonomy, anatomy, and natural history of all major vertebrate animal classes will be explored through classroom lecture and demonstration and field assessment. Field experience will include both optional and required trips to museums, aquariums, and field locations.

Biology 15
Environmental Aspects of Biology
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
Basic ecological and biological principles and concepts are emphasized in studying the structure and function of ecosystems. Major ecological problems such as overpopulation, resource depletion and food production are related to endangered species and habitat degradation. Environmental pollution of air and water resources are considered in local areas as well as national and international situations. Students are encouraged to participate in local activities addressing environmental problems and restoring and improving local habitats.

Biology 16
Field Entomology
4 units; 2 hours lecture, 6 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This is a survey course in insect biology, taxonomy, physiology, and ecology with some discussion of the economic importance and control of insects. Major insect orders and families will be introduced through lecture with slides and live and preserved specimens. Emphasis is placed on learning to use a key to identify insect specimens in the laboratory and recognizing them in the field. Field trips to local sites including local desert and coastal mountain habitats will be taken to practice collection, preparation, and recognition techniques.

Biology 17
Marine Biology
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This is an introductory marine biology lecture course exploring biological principles of structure, function and adaptation for marine life. It includes a review of the history of marine biology and a discussion of local species of marine plants and animals and major marine communities. Human interaction and impact on the ocean is also discussed.

Biology 18
Marine Biology Laboratory
1 unit; 3 hours lab
Prerequisite: Biology 17 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU, UC
This is an introductory marine biology laboratory course designed to compliment the marine biology lecture course. The laboratory course will explore the animals and plants living in the ocean and their structure and adaptations for a marine environment. Local species will be identified and classified and local aquariums will be visited.

Biology 50
Special Topics in Biology
Units determined by individual course; lecture/lab hours determined by individual course
Credit determined by individual course
This course is designed to explore topics in Biology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Biology 99abc
Independent Study in Life Science
1-3 units; hours to be arranged
Enrollment Limitation: any two Life Science courses, except Biology 10 or Biology 15, with a minimum grade of B in each and acknowledgement by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides the student an opportunity to explore research problems in life science not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned laboratory work and research projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Biology 101
Principles of Biology I
5 units; 3 hours lecture, 6 hours lab
Prerequisite: Chemistry 4 with minimum grade of C or the equivalent
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of eukaryotic organisms, their evolution and ecology. The student will have a thorough exposure to plant and animal anatomy and physiology, and will utilize animal dissection in the lab. Students will be expected to complete a project that includes hypothesis, prediction, experimentation, and presentation of results. This course is one of three courses in the biology series designed for biology majors, including those students planning to pursue a career in medicine, dentistry, or other life sciences.
Note: It is recommended that Chemistry 1A be taken concurrently in preparation for Biology 102.

Biology 102
Principles of Biology II
5 units; 3 hours lecture, 6 hours lab
Prerequisite: Chemistry 1A with minimum grade of C or the equivalent
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course offers a detailed study of eukaryotic cell anatomy, metabolism, and division, including the study of Mendelian genetics and the molecular genetics of eukaryotes. Prokaryotic cellular structure (eubacteria and archaea), microbial genetics, and viruses are also studied. The scientific method is discussed in the lecture component and students implement elements of the process in various laboratory exercises. This course is one of three courses in the biology series designed for biology majors, including those students planning to pursue a career in medicine, dentistry, or other life sciences.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Biology 103
(formerly 1C)
Fundamentals of Molecular Biology
3 units; 3 hours lecture
Prerequisite: Biology 101 and 102 with a minimum grade of C in each course;
Chemistry 7A with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to molecular biology. The student will study DNA, RNA and protein structure; protein biochemistry; protein purification and analysis; genome organization of viruses, prokaryotes and eukaryotes; DNA replication; transcription and splicing; regulation of transcription; translation; and recombinant DNA technology. The student will also explore the uses of DNA technology, such as forensics and agriculture, as well as the ethical considerations of these uses.

Botany
See Biology

Building
See Construction Technology

Business

Business 1A
Financial Accounting
4 units; 4 hours lecture, 1 hour lab
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU - limitations apply, UC
This is an introductory course covering the fundamentals of financial accounting of the corporate entity. Topics will include the analysis, recording, and summarizing of accounting transactions on the accrual basis. An emphasis will be on accounting as an information system to meet the demands of users for decision making.

Business 1B
Managerial Accounting
4 units; 4 hours lecture, 1 hour lab
Prerequisite: Business 1A with a minimum grade of C
Credit, degree applicable
Transfer CSU - limitations apply, UC
This course emphasizes advanced accounting theory, principles and practices for the corporation form of ownership. A major focus of the course is on managerial, cost, and manufacturing accounting and related issues in the corporate environment.

Business – A.S. Degree and Certificates of Achievement
(Business Division)

Business Administration – The program is designed to provide the opportunity for a transfer business major to achieve an associate degree. The student will acquire a foundation in basic accounting principles, business law, and macroeconomics and microeconomics theory. Students will be able to apply methodologies to assess fiscal and monetary policy in the marketplace and understand the basics of contract law. Competencies will be assessed through examination and projects.

Business (emphasis in Accounting) – By completing the degree or certificate requirements of the accounting program, students will acquire the ability to apply the fundamental theory, principles, and practices of the accounting cycle for unincorporated and corporate forms of business, financial, and managerial accounting theory as well as cost accounting and cost procedures used in business and industry. The student will also learn income tax regulations pertaining to individual and business income tax preparations and planning. Competencies will be assessed regularly through examinations and comprehensive problems. The major provides career opportunities in entry-level accounting positions.

Business (emphasis in Business Management) – The program provides students with the opportunity to obtain a degree or certificate in business management. The student completing this program will have the ability to organize, operate, and manage business organizations, utilize human resources, improve working relationships, draft letters and reports, and speak in various business situations. Competency will be measured by examinations, presentations, projects, and case problems.

Business (emphasis in Marketing) – The program is designed to provide students with the opportunity to obtain a degree or certificate in marketing. The student will explore opportunities in the marketing field, acquire basic marketing terminology, applying marketing concepts to the role of marketing in society and in the business firm, and balance factors that influence marketing decision-making in the global economy. Competency will be measured by examinations, projects, and case problems.

Business (emphasis in Office Administration) – The degree and certificate programs in office administration include options in office systems, management, bookkeeping, computer applications, and office clerk. Upon completion of the requirements, students will be able to operate office equipment appropriate to their specialty, apply American business office procedures, and understand information management principles, operations, and organization. Competency will be assessed regularly through examinations and projects.

El Camino College Major and Certificate Requirements

Business Administration Major
Students who intend to complete a four-year baccalaureate program in Business Administration should complete the lower division requirements of the college of their choice. See a counselor for more specific information.

Accounting Major
Business 1A, 1B, 2A, 2B; Computer Information Systems 13; Law 5; two courses from the following: Business 4, 5A; Law 6
Total Units: 26-27

Certificate of Achievement – Accounting
A Certificate of Achievement will be granted to the student who completes the courses listed below. At least 15 units of the certificate requirements must be completed at El Camino College.
Business 1A, 1B, 2A, 2B, Computer Information Systems 13, Law 5; two courses from the following: Business 4, 5A, Law 6
Total Units: 26-27

(Continued on next page)

Business 2A
Intermediate Accounting
3 units; 3 hours lecture
Prerequisite: Business 1B with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course emphasizes advanced financial accounting theory and practice for the corporate form of ownership. A major focus of the course is on the preparation and analysis of complex financial statements, notes and special reporting issues.

Business 2B
Intermediate Accounting
3 units; 3 hours lecture
Prerequisite: Business 2A with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course is a continuation of the study of advanced financial and managerial accounting theory and practice for the corporate form of ownership. A major focus of the course is on the analysis, evaluation, and preparation of complex corporate financial statements including notes, special topics, and special reporting issues.

Business 3
QuickBooks
2 units; 1.5 hours lecture, 1.5 hours lab
Credit, degree applicable
Transfer CSU
In this course students will be introduced to basic financial record keeping software using the double-entry system for recording transactions. Emphasis will be placed on how to use the accounting application software in a small business environment.
Note: Letter grade or P/NP option.

Business 4
Cost Accounting
3 units; 3 hours lecture
Prerequisite: Business 1B with a minimum grade of C or equivalent experience
Credit, degree applicable
Transfer CSU
This course emphasizes the theory and practice of cost accounting and cost procedures used in business and industry. A major focus is on job order, process, and standard cost methods.

The hours per week of courses may be adjusted based on the length of the term.

Business

(Continued from previous page)

Business Management Major
A minimum of 12 units must be completed at El Camino College.
Business 1A or 11; Business 14 or 21; Business 20, 22, 24, 25, 29; Business 27 or 28; Law 5
Recommended electives: Business 1B, 17, 90, Computer Information Systems 13
Total Units: 27-28

Certificates of Achievement - Business Management
A Certificate of Achievement will be awarded to the student completing the requirements of the Business Management or Retail Management or International Business options.
Business Management Option: Business 1A or 11; Business 14 or 21; Business 20, 22, 24, 25, 29; Business 27 or 28; Law 5
Total Units: 27-28
Retail Management Option: A minimum of 15 units must be completed at El Camino College. Business 1A or 11; Business 14, 15, 19, 20, 21, 22, 28, 29, Computer Information Systems 13
Total Units: 30-31
International Business Option (pending approval by the California Community Colleges System Office): A minimum of 12 units must be completed at El Camino College. Business 25, 90, 91, 92, 93, 94, 97; two courses from: Anthropology 2, Business 20, Computer Information Systems 30
Total Units: 27

Marketing Major
A minimum of 12 units must be completed at El Camino College.
Business 1A or 11; Business 12 or 24; Business 14, 22, 25; 29; Business 27 or 28; Law 5
Recommended electives: Business 17, 20, 21, 90, Computer Information Systems 13
Total Units: 24-25

Certificate of Achievement – Marketing
A Certificate of Achievement will be awarded to the student completing the courses listed below. A minimum of 12 units must be completed at El Camino College.
Business 1A or 11; Business 12 or 24; Business 14, 22, 25, 29; Business 27 or 28; Law 5. Students who anticipate employment with large businesses are advised to take Business 12. Those interested in smaller enterprises should complete Business 24.
Total Units: 24-25

(Continued on next page)

Business 5A
Income Tax Accounting
4 units; 4 hours lecture
Prerequisite: Business 1A with a minimum grade of C or equivalent experience
Credit, degree applicable
Transfer CSU
This course emphasizes income tax regulations pertaining to individual and business income tax reporting. A major focus of this course is on income inclusions, exclusions, exemptions, capital gains and losses, business and individual deductions.

Business 5C
Income Tax Microcomputer Applications
1 unit; 0.5 hour lecture, 1 hour lab
Prerequisite: Business 5A with a minimum grade of C or concurrent enrollment or equivalent experience
Credit, degree applicable
Transfer CSU
This course is an introduction to computer application in tax preparation and planning. A major focus of the course is on preparation and analysis of tax returns by using a current tax software program.
Note: Letter grade or P/NP option.

Business 11
Accounting for Small Business
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
This course includes basic accounting procedures, preparation and analysis of financial statements, banking, payroll processes, and special accounting journals. This is an accounting course for small business in service and retail environments.
Note: This course is not open to students who have credit for or are currently enrolled in Business 1A. Not recommended for the student who has completed two years of high school bookkeeping with a grade of C or better.

Business 12
Advertising
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course students will study the field of advertising and promotion from a marketing perspective. Topics to be covered include the practice and management of advertising by agencies, clients, and the media. Also emphasized are the concepts of ethics, social responsibility, and consumer benefits. Effective techniques in the preparation of different types of advertisements will also be analyzed and applied.

Business 14
Marketing
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course provides an intensive study of concepts and strategies on which the field of marketing is based. Emphasis will be on product decisions, distribution decisions, promotion decisions, and pricing decisions. The general elements of electronic marketing will also be studied.
Note: Letter grade or P/NP option.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Business

(Continued from previous page)

Office Administration Major
18 units of the major requirements must be completed at El Camino College. Required courses are: Business 16, 27, 28, 41, 43, 52A, 52B, 54. In addition, students must complete the Office Systems Option or the Management Option.
Office Systems Option: Business 40, 55, Business 60C; two courses from Business 49abcd, 56abcd, 57abcd; one course from: Computer Information Systems 26, 28
Total Units: 32
Management Option: Business 22, 29, 60B; three courses from: Business 1A or 11, Business 20, 25, Computer Information Systems 13
Total Units: 36-37

Certificates of Achievement - Office Administration
Bookkeeping Clerk Option: A Certificate of Achievement will be granted to students completing the courses listed below. A minimum of 10 units must be completed at El Camino College. All units must be completed within five years of the date of issue of the certificate. Students who have questions regarding this requirement should contact the Counseling Division or Evaluations Unit for a waiver petition.
Business 11 or 1A; Business 15, 16, 40, 41, 43, 60B; Business 3 or Computer Information Systems 26; Business 54 or Computer Information Systems 13
Total Units: 20-23
Office Applications Specialist Option: A Certificate of Achievement will be granted to students completing the courses listed below. A minimum of 11 units must be completed at El Camino College. All units must be completed within five years of the date of issue of the certificate. Students who have questions regarding this requirement should contact the Counseling Division or Evaluations Unit for a waiver petition.
Business 16, 27, 40, 52A, 52B, 54, 55, 60C; two courses from Business 49abcd, 56abcd, 57abcd
Total Units: 21
Office Clerk Option (pending approval by the California Community Colleges System Office): A Certificate of Achievement will be granted to students completing the courses listed below. A minimum of 7 units must be completed at El Camino College. All units must be completed within five years of the date of issue of the certificate. Students who have questions regarding this requirement should contact the Counseling Division or Evaluations Unit for a waiver petition.
Business 16, 40, 41, 43, 60B, 60C; Business 52A and 52B or Business 54
Total Units: 14

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Business 15
Business Mathematics
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
This course is designed to prepare students for mathematical concepts involving quantitative reasoning and analysis in management, finance, accounting, real estate, and other areas of business. The course content involves a thorough study of all aspects of business mathematics including basic computational skills, bank reconciliation, use of business formulas and equations, payroll, discounts and markup/markdowns, simple and compound interest, present value analysis, annuities and sinking funds, credit, depreciation and inventory, taxes, insurance, financial reports, and business statistics.
Note: Letter grade or P/NP option.

Business 16
10-Key Calculating for Business
1 unit; 0.5 hour lecture, 1.5 hours lab
Credit, degree applicable
This course offers instruction and practice for developing speed and accuracy on the 10-key computer keypad using proper touch techniques. Students will learn to apply basic math and calculator functions to typical business tasks such as payroll, invoices, pricing, inventory, and depreciation.

Business 17
Personal Finance
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course basic economic issues applied to individual and family management, such as financial planning, record keeping, budgeting, managing money, credit, and taxes are covered. Housing and other major expenditures, protecting assets through insurance and other means, investing in stocks, bonds, mutual funds, and real estate, as well as retirement planning are emphasized.
Note: Letter grade or P/NP option.

Business 19
Principles of Retailing Management
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
This course is a study of the principles and practices used in the management of retail stores. Topics include site selection, layout, organization, staffing, positioning, customer service, promotional techniques and all aspects of the critical buying function.
Note: Letter grade or P/NP option.

Business 20
Business Management
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU
This course is a study of basic business management concepts and theories in a global, competitive environment. Emphasis is on an operational analysis of the manager's role in multinational business organizations. Also emphasized are the principles of Total Quality Management and the traditional management functions of planning, organizing, staffing, leading, and controlling.
Note: Letter grade or P/NP option.

Business 21
Personnel Management
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course students will gain an understanding of effective utilization of human resources in the business enterprise. Emphasis is on principles of personnel administration, supervisory and leadership techniques, human relations, concepts of motivation, business communication, and laws governing the rights of employers and employees. Effective management of common types of personnel problems will be discussed.

Business 22
Human Relations in Business
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course students will examine human relations theories and applications that will promote effective work relationships. Ethical issues in business are addressed as well as an explicit process of ethical reasoning that will aid in defining and dealing with dilemmas in the workplace. Current events and case studies will be used to develop critical skills as students apply theories and principles.
Note: Letter grade or P/NP option.

Business 24
Small Business Management
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course the students will examine basic concepts and techniques used in small business management. Emphasis will be on entrepreneurial strategy, new venture opportunities, the business plan, small business marketing, small business management, and financial management.
Note: Letter grade or P/NP option.

Business 25
Introduction to Business
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course is a survey of organization and management factors influencing the establishment, location, and operation of businesses. This course emphasizes the functional area of accounting as well as the legal framework within which business activities are conducted. The course also emphasizes the principles of Total Quality Management (TQM) in a multi-cultural and globalized environment.
Note: Letter grade or P/NP option.

The hours per week of courses may be adjusted based on the length of the term.

Business 27
Effective English for Business
3 units; 3 hours lecture
Prerequisite: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This is a comprehensive course designed to strengthen and refine the student's ability to intelligently express and communicate through written language in a business environment. The course will focus on the methods of organizing and presenting business data and ideas in written explanatory and persuasive formats as well as the structural relationships in language. Assignments are designed to stimulate thought and discussion as well as to formulate clear and precise expression of ideas.

Business 28
Written Business Communications
3 units; 3 hours lecture
Prerequisite: eligibility for English 1A
Credit, degree applicable
Transfer CSU
In this course students will study the theory and practice of functional writing to give them an understanding of the human relations aspects of communication, to help develop logical patterns of organizing ideas, and to aid in achieving clear, concise expression. Practice in writing various types of business letters and reports will be emphasized throughout the course.

Business 29
Oral Business Communications
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU
In this course students will learn the principles of effective speaking in business situations. Interviews, conferences, briefings, and group discussions will be covered. Techniques of research, preparation, presentation, and evaluation are emphasized.
Note: This course is the same as Supervision 27.

Business 40
Career Orientation
2 units; 2 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course the student will explore opportunities and requirements in careers of interest. The course provides instruction and practice in the job application process, including resumes and interviews. Behaviors and qualities necessary for continued career satisfaction and development are analyzed.

Business 41
Records/Information Management
2 units; 2 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course the student will be introduced to the field of records/information management. Students learn the procedures of alphabetic, geographic, subject, and numeric filing and how to apply the alphabetic rules to the computer. Students also learn the principles of records retention and transfer and the various controls of a records/information management program.
Note: This course is offered in the spring semester only.

Business 43
Office Procedures
3 units; 3 hours lecture
Recommended Preparation: Business 60A or concurrent enrollment or the ability to keyboard by touch; eligibility for English A
Credit, degree applicable
Transfer CSU
This course is designed to develop an understanding of and ability to apply American business office procedures, responsibilities, and standards, and to develop an awareness of the globalization of American business.
Note: This course is offered fall semesters only.

Business 49abcd
Voice Recognition for Computer Input
1 unit; 0.5 hour lecture, 1.5 hours lab
Recommended Preparation: eligibility for English A and English 84
Credit, degree applicable
Students use voice-recognition software to input information into the computer by voice. The course focuses on learning dictation commands and techniques for continuous voice dictation, formatting and editing documents, and all menu and keyboard manipulations.
Note: Letter grade or P/NP option.

Business 50
Special Topics in Business
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Business more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Business 52A
Microsoft Word Applications I
2 units; 1 hour lecture, 2 hours lab
Recommended Preparation: eligibility for English 84; keyboarding skill is strongly recommended
Credit, degree applicable
Transfer CSU
In this course, students will learn the basics of Microsoft Word software in a Windows environment. Topics covered include creating, saving, retrieving, printing, and managing documents. Students will also learn to efficiently edit documents using mouse and keyboard; manipulate text within and between windows; use writing tools, including speller and grammar checker, thesaurus, translation, and research features; change fonts and format text with styles, themes, templates, and special features; manipulate tabs and change margins, spacing, and alignment; create multiple-page documents and insert page numbers, headers, and footers; draw shapes and insert images, textboxes, borders, and shading; and create tables and charts..
Note: Letter grade or P/NP option.

Business 52B
Microsoft Word Applications II
2 units; 1 hour lecture, 2 hours lab
Recommended Preparation: Business 52A or equivalent experience with Microsoft Word
Credit, degree applicable
Transfer CSU
In this course, students will learn advanced features of Microsoft Word software in a Windows environment. Topics covered include merging documents; tracking and comparing changes in documents; customizing Word options, styles, and themes; creating fill-in form templates; and protecting and preparing documents for distribution. Students will also learn to use Word features in research papers to automate the creation of references, bibliographies, and indexes as well as tables of contents, figures and authorities.
Note: Letter grade or P/NP option.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Business 54
Microsoft Office–Integrated Software Applications
4 units; 2 hours lecture, 4 hours lab
Recommended Preparation: Business 52B or Computer Information Systems 13
Credit, degree applicable
Transfer CSU
Utilizing Microsoft Office in a Windows environment, the student will learn how integrated software allows sharing of data in various applications. Students will be introduced to spreadsheets, databases, and presentation applications and will learn how to integrate them with Word documents and the World Wide Web. Managing e-mail and contacts using personal information management software is also introduced.

Business 55
Advanced Microsoft Office–Integrated Software Applications
4 units; 2 hours lecture, 4 hours lab
Prerequisite: Business 54 or Computer Information Systems 13 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
Extending upon the student's basic knowledge of Microsoft Office software applications (including Word, Excel, Access and Powerpoint), the course will focus on advanced techniques and integration among these applications, the Internet, and other sources. Students will also learn how office professionals can use electronic communications and information management software effectively.

Business 56abcd
Microsoft Word Certification Preparation
1 unit; 0.5 hour lecture, 1 hour lab
Prerequisite: Business 52A or Business 54 or Computer Information Systems 13 with a minimum grade of C in prerequisite or equivalent experience with Microsoft Word
Recommended Preparation: Business 52B or Business 55
Credit, degree applicable
Transfer CSU
This course prepares students for Microsoft Word certification exams. Students will assess existing Word skills, analyze weaknesses, and build proficiency in skill sets required for Microsoft Word certification. An optional Microsoft Word certification test is offered on completion of the course for an additional fee.
Note: Pass/no pass only.

Business 57abcd
PowerPoint Certification Preparation
1 unit; 0.5 hour lecture, 1 hour lab
Prerequisite: Business 54 or Computer Information Systems 13 with a minimum grade of C in prerequisite or equivalent experience with Microsoft PowerPoint
Recommended Preparation: Business 55
Credit, degree applicable
Transfer CSU
This course prepares students for Microsoft PowerPoint certification exams. Students will assess existing PowerPoint skills, analyze weaknesses, and build proficiency in skills sets required for Microsoft PowerPoint certification. An optional Microsoft PowerPoint certification test is offered on completion of the course for an additional fee.
Note: Pass/no pass only.

Business 60A
Microcomputer Keyboarding
1 unit; 0.5 hour lecture, 1.5 hours lab to be arranged
Credit, degree applicable
Transfer CSU
In this course the student will learn the touch keyboarding method for alphabetic and numeric/symbol keys on micro-computers. The course aids the student in developing the fundamental skills necessary to input information efficiently and accurately. This course is recommended for students interested in developing basic computer keyboarding skills.
Note: Letter grade or P/NP option.

Business 60B
Microcomputer Document Processing
1 unit; 0.5 hour lecture, 1.5 hours lab to be arranged
Prerequisite: Business 60A with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
In this course the student will use a word processing program to prepare documents in various business formats and will build touch skill in speed and accuracy. Examples of business documents include business correspondence, reports, and tables. This course is recommended for students who need to develop speed and accuracy skill as well as document formatting proficiency for personal or business use.
Note: Letter grade or P/NP option.

The hours per week of courses may be adjusted based on the length of the term.

Business 60C
Microcomputer Document Formatting
1 unit; 0.5 hour lecture, 1.5 hours lab to be arranged
Prerequisite: Business 60B with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
In this course the student will use a microcomputer word processing program to increase touch skill in speed and accuracy. Formatting various kinds of business correspondence, reports, and tabulations from unarranged and rough draft sources is also emphasized. This course is recommended for students who need to develop speed and accuracy skill as well as document formatting proficiency for personal and business use.
Note: Letter grade or P/NP option.

Business 90
(formerly 18)
International Aspects of Business
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course students will study international business theories. Topics will include cross-cultural relations, comparative economic systems, comparative political systems, and international economics. Law and international trade, foreign exchange, letters of credit, export requirements, and emerging issues in international trade will also be covered.
Note: Letter grade or P/NP option.

Business 91
International Marketing
3 units; 3 hours lecture
Recommended Preparation: Business 90 with a minimum grade of C or concurrent enrollment or equivalent experience
Credit, degree applicable
Transfer CSU
In this course, the student will gain an understanding of the nature and extent of international marketing, as well as the challenges of marketing internationally and how marketers approach and manage these challenges. Topics include the economic, political, environmental, and cultural factors that affect international marketing as well as the tools and resources available to assess these factors. Selection of viable markets, options available to marketers to develop a global and international strategy, and individual marketing strategies for specific countries will also be discussed.

Business 92
Fundamentals of Exporting
3 units; 3 hours lecture
Recommended Preparation: Business 90 with a minimum grade of C or concurrent enrollment or equivalent experience
Credit, degree applicable
In this course, the student will gain an understanding of the role of exporting in a global economy and the key steps involved in the export process. Topics will include evaluation of a company's export readiness and potential, market research, identification of the best export markets, development of export market plans, and market entry strategies. Promotion of overseas sales, finding buyers and distributors, responding to inquiries, calculation of export prices, issuance of pro forma invoices, preparation of goods for shipment, preparation of the necessary export documentation, insurance, financing, and delivery of goods will also be covered.

Business 93
Fundamentals of Importing
3 units; 3 hours lecture
Recommended Preparation: Business 90 with a minimum grade of C or equivalent experience
Credit, degree applicable
Transfer CSU
In this course students will analyze the balance of trade between the United States and other countries. Topics will include the effects of imports on the economy, employment, and the standard of living in the United States. Importing as a business, the import process, the role of United States Customs, and distribution from the port of entry to United States markets will also be covered.

Business 94
International Trade Logistics
3 units; 3 hours lecture
Recommended Preparation: Business 90 with a minimum grade of C or equivalent experience
Credit, degree applicable
Transfer CSU
In this course students will examine logistical and documentary aspects of moving goods internationally from source to final destination. Emphasis will be placed on all modes of transportation involved in doing business on a global basis as well as the shipping and other documents required for specific trade transactions. Topics will also include international commercial terms (Incoterms) commonly used for pricing and transport of goods as well as the roles of freight forwarders, carriers, and other providers of logistics and document-preparation services.

Business 95abcd
Cooperative Work Experience Education (Banking and Finance)
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Business/Banking and Finance field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Business 95abcd
Cooperative Work Experience Education (Office Administration)
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Business/Office Administration field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Business 95/96abcd
Cooperative Work Experience Education (Accounting)
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Business/Accounting field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Business 95/96abcd
Cooperative Work Experience Education (Business Management/Marketing)
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Business Management/Marketing field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Business 96abcd
Cooperative Work Experience Education
(Business Administration)
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Business Administration field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Business 97
International Business Law
3 units; 3 hours lecture
Recommended Preparation: Business 90 with a minimum grade of C or equivalent experience
Credit, degree applicable
Transfer CSU
In this course students will study legal and regulatory aspects of international business. Emphasis is on the tariff and non-tariff measures used by governments to regulate trade, multilateral and bilateral treaties, and agreements to facilitate trade. Other topics will include the United States and international agencies charged with administering and enforcing specific trade laws and regulations.

Business 100
(pending approval by the California Community Colleges System Office)
Supervised Tutoring: Computer Applications
0 units; 72 maximum hours lab per semester
Enrollment Limitation: referral by instructor or counselor based on assessed academic need
Non-credit
This course provides the student with supervised tutoring related to classroom and lab assignments. This tutoring covers computer application skills and review of course content.
Note: This course is repeatable and open for enrollment at registration and at any time during the semester.

Cabinet Making

See Construction Technology

Chemistry

Chemistry 4
Beginning Chemistry
5 units; 5 hours lecture, 4 hours lab
Prerequisite: Mathematics 70 with a minimum grade of C or equivalent or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, degree applicable
*Transfer CSU, UC**
This course introduces the principles of chemistry, modern concepts of atomic structure and periodicity as a basis for understanding bonding, chemical formulas, chemical equations and chemical reactions, states of matter, important elements and their compounds, solutions, acid-base theories and reactions, net ionic equations, oxidation-reduction, kinetics and chemical equilibrium, chemical nomenclature and calculations. In the laboratory, emphasis is on observations, measurements, and elementary quantitative experiments with an introduction to qualitative analysis.
**Note: The maximum UC credit allowed for students completing Chemistry 4 and Chemistry 20 is one course. Students will not receive UC credit for Chemistry 4 if taken after Chemistry 1A.*

The hours per week of courses may be adjusted based on the length of the term.

Chemistry 1A
General Chemistry I
5 units; 5 hours lecture, 4 hours lab
Prerequisite: (1) Chemistry 4 with a minimum grade of C or 1 year of high school chemistry and qualification by testing (El Camino College Chemistry Placement Test) and assessment; (2) eligibility for Mathematics 170
Credit, degree applicable
Transfer CSU, UC
This course details fundamental theory and principles of atomic and molecular structure, physical states and chemical reactions. Included is the study of elements, compounds, periodic relationships, bonding, acids and bases, oxidation-reduction, energy, solutions, electrolytes and chemical equations. Descriptive chemistry of water and selected nonmetals including hydrogen, oxygen and carbon is presented.

Chemistry 1B
General Chemistry II
5 units; 5 hours lecture, 4 hours lab
Prerequisite: Chemistry 1A with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course details the chemistry of elements and their compounds in periodic groupings, transition metal complexes, chemical equilibrium, chemical thermodynamics, kinetics, aqueous solutions, net ionic equations, oxidation – reduction equations, electrochemistry and nuclear processes. In the laboratory, qualitative analysis of common metallic and nonmetallic ions will be performed, as well as additional experiments on selected lecture topics.

Chemistry – A.S. Degree

(Natural Sciences Division)

The program is designed to provide students the opportunity to obtain a degree upon successful completion of the requirements of a chemistry transfer major. The student will acquire the ability to apply fundamental theories and principles of atomic and molecular structure and to understand energy concepts and kinetics in both inorganic and organic reactions. Laboratories are designed to complement the lecture material providing the student with a foundation in quantitative and qualitative chemical techniques. Competencies will be assessed regularly by examining student abilities to predict chemical reactions, explain observed properties and behaviors, write reaction mechanisms, and perform standard laboratory procedures.

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Chemistry 7A
Organic Chemistry I
5 units; 3 hours lecture, 6 hours lab
Prerequisite: Chemistry 1B with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC

This course involves a comprehensive study of the major classes of aliphatic hydrocarbons and of organic halides, alcohols and ethers. This includes nomenclature, structure, properties, stereochemistry, reactions, synthetic methods, and spectroscopy. Emphasis is placed on a systematic approach to understanding the material through the use of bonding theories, energy concepts, kinetics, and reaction mechanisms. In the laboratory, emphasis is on techniques of separation and purification of organic compounds, common organic reactions, and spectroscopy.

Chemistry 7B
Organic Chemistry II
5 units; 3 hours lecture, 6 hours lab
Prerequisite: Chemistry 7A with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC

This course involves a comprehensive study of aromatic compounds and the major classes of oxygen-containing and nitrogen-containing organic compounds. This includes nomenclature, structure, properties, stereochemistry, reactions, synthetic methods, and spectroscopy. Emphasis is placed on a systematic approach to understanding the material through the use of bonding theories, energy concepts, kinetics, and reaction mechanisms. A study of biochemistry focuses primarily on lipids, carbohydrates, amino acids and proteins. In the laboratory, emphasis is on qualitative organic analysis, common organic reactions, and multi-step synthesis.

Chemistry 20
Fundamentals of Chemistry
5 units; 4 hours lecture, 3 hours lab
Prerequisite: Mathematics 40 or 41B with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Recommended Preparation: eligibility for English 84
Credit, degree applicable
*Transfer CSU, UC**

This course introduces fundamental theory and principles of chemistry applied to inorganic, organic, and biological chemistry. Atomic and molecular structure, chemical and physical changes, gases, solutions and colloids, nomenclature, equations and calculations will be emphasized.

**Note: The maximum UC credit allowed for students completing Chemistry 4 and Chemistry 20 is one course. Students will not receive UC credit for Chemistry 20 if taken after Chemistry 1A.*

Chemistry 21A
Survey of General and Organic Chemistry
4 units; 4 hours lecture, 2 hours lab
Prerequisite: eligibility for Mathematics 70
Credit, degree applicable
*Transfer CSU, UC**

The general chemistry topics in the course are units of measurement, atomic structure, the periodic table, inorganic formulas and nomenclature, chemical bonding, common chemical reactions, stoichiometry, states of matter, solutions, introduction to reaction rates and equilibrium, elementary acid-base theory and pH and buffers. The organic chemistry portion of the course studies the properties, nomenclature, common reactions and some reaction mechanisms for several classes of organic compounds. These classes include alkanes, alkenes, alkynes, alcohols, phenols and ethers. There is also an introduction to resonance and stereoisomerism. The emphasis in the laboratory is on observations and measurements.

**Note: Students will not receive UC credit for Chemistry 21A if taken after Chemistry 1A or Chemistry 7A.*

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Chemistry 21B
Survey of Organic and Biochemistry
4 units; 4 hours lecture, 2 hours lab
Prerequisite: Chemistry 21A with a minimum grade of C
Credit, degree applicable
*Transfer CSU, UC**

The study of organic chemistry continues with the nomenclature, properties, preparation, reactions and derivatives of carboxylic acids, amines, aldehydes and ketones. Principles of biochemistry are introduced. Descriptions of the structures and biochemical reactions of carbohydrates, lipids, proteins, enzymes and nucleic acids will be analyzed. Catabolic/anabolic pathways as well as the energy consumed or produced by the metabolism of carbohydrates, fats and proteins will be examined. The chemistry of photosynthesis will be studied.

**Note: Students will not receive UC credit for Chemistry 21B if taken after Chemistry 7B.*

Chemistry 50
Special Topics in Chemistry
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course

This course is designed to explore topics in Chemistry more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Chemistry 99abc
Independent Study – Introduction to Research
1-3 units; hours to be arranged
Enrollment Limitation: two Chemistry courses with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply

This course provides the student an opportunity to explore research problems in Chemistry not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned laboratory work and research projects (60 hours per unit).

Note: Refer to page 11 of this Catalog for eligibility requirements.

Child Development

Child Development 50
Special Topics in Child Development
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Child Development more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Child Development 95/96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a positition related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Child Development field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Child Development 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Child Development with a minimum grade of B in each and the recommendation of the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of early childhood education not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned early childhood education projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Childhood Education – A.A. Degree and Certificates of Achievement

(Behavioral and Social Sciences Division)

The degree and the certificates in childhood education prepare students for careers in private or public programs serving infants, toddlers, preschoolers, children with special needs, or children in before and after school care. The transfer degree option prepares students to continue studies at a four-year institution. Students will acquire the ability to apply developmental theories in observing and assessing children in physical, cognitive, and psychosocial domains and will develop skills needed for working effectively with families, co-workers, and community agencies. Students will also gain the ability to design, implement, and evaluate developmentally appropriate and culturally sensitive curriculum. Program assessment will be conducted regularly through examinations, presentations, student self-assessment, portfolios, and tracking student employment and promotion in the teaching field.

El Camino College Major Requirements
A minimum of 15 units of the major requirements must be completed at El Camino College.
Child Development 103, 104, 112, 114; Child Development 150 or 152; two courses from Child Development 116, 117, 118, 119; complete 8-9 units from Child Development 105, 107, 108, 110, 114, 116, 117, 118, 119, 122, 123, 125, 126, 129, 130, 136, 150, 152, 154, 160, 163, 166, 169, 170A, 170B, Nutrition and Foods 15
Total Units: 29-30

Note: Proof of a valid Pediatric CPR and First Aid Certification may be required for employment. This requirement may be met by successfully completing Child Development 111.

Certificates of Achievement
Early Childhood Education Option:
A Certificate of Achievement will be granted upon completion of the courses listed below. A minimum of 12 units must be completed at El Camino College. Child Development 103, 104, 108, 112, 114; one course from Child Development 116, 117, 118, 119
Total Units: 18
Early Intervention Assistant Option (pending approval by the California Community Colleges System Office):
A Certificate of Achievement will be granted upon completion of the courses listed below. A minimum of 15 units, including Child Development 169, must be completed at El Camino College.
Child Development 103, 104, 107, 110, 111, 150, 152, 169; three units from: Child Development 116, 117, 119; three units from: Child Development 114, 154, 160, 163, 166
Total Units: 28
Special Education Assistant Option:
A Certificate of Achievement will be granted upon completion of the courses listed below. A minimum of 15 units of the certificate requirements, including Child Development 152 and 154, must be completed at El Camino College.
Child Development 103, 104, 111, 150, 152, 154, 169; one course from Child Development 110 or Nursing 112; one course from Child Development 116, 117, 118, 119; six units from: Child Development 107, 108, 114, 122, 123,163, 166, 170A, 170B, Nursing 118, Nutrition and Foods 15, Sign Language/Interpreter Training 15
Total Units: 31

For information regarding the School Health Clerk Certificate of Achievement, please refer to page 222 of this Catalog.

(Continued on next page)

Child Development 103
(formerly 3)
Child Development
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to child development from conception through adolescence with emphasis on physical, cognitive and psychosocial growth. The effect of environmental and cultural influences on development will be investigated. Developmental theories will be analyzed and tested through practical applications such as child observations and interviews.
Note: This is a core course for all teachers and assistants in programs for young children regulated by the California State Department of Social Services and the State Department of Education.

Child Development 104
(formerly 9)
The Home, The School, The Community
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course examines the interrelationship of the home, the school and the community and the influences on the development of children from infancy through adolescence. Emphasis is on the methods used by socializing agents such as educational systems, peer groups and mass media to prepare the child for living in a diverse society. Topics will include, but are not limited to: cultural influences on behavior, parenting styles, social policy, child abuse and responding to the diverse needs of children in the school and community.
Note: This is a core course for all teachers and assistants in programs for young children regulated by the California State Department of Social Services and the State Department of Education.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Childhood Education

(Continued from previous page)

The **State Department of Social Services** will qualify a person as a preschool teacher if the student has at least 12 units in Early Childhood Education. These units must include Child Development 103, 104 and one course from Child Development 116, 117, 118 or 119. Preschool directors must complete 3 additional units in Program Administration (Child Development 29 or 30).

The California State Department of Education Child Development Permits:
The Child Development Permit qualifies the holder to teach in publicly funded early childhood education programs such as Head Start and State Preschool.

All Child Development Permits are renewable after 5 years by completing 105 hours of professional growth activities. This may include college courses, staff development activities and/or conference and workshop attendance.

A minimum grade of C is required in all Child Development courses applied toward the Child Development Permit.

Some Child Development Permits require 16 general education units. Recommended courses for this requirement are: Biology 10; English 1A, 27; Psychology 5 or Sociology 101 or Anthropology 2.

The following Child Development Permits are issued:

1. Assistant: 6 units in Early Childhood Education - Child Development 103 and 104 are recommended; experience: none required
2. Associate Teacher: 12 units in Early Childhood Education to include: Child Development 103, 104, and one course from Child Development 116, 117, 118, 119; remaining 3 units may be selected from Child Development 107, 108, 110, 111, 112, 116, 117, 118, 119, 122, 123, 131, 150, 152, 154, Nursing 112, Nutrition and Foods 15; experience: 50 days of 3 hours per day within 2 years
3. Teacher: 24 units in Early Childhood Education to include: Child Development 103, 104, and one course from Child Development 116, 117, 118, 119; remaining units may be selected from Child Development 107, 108, 110, 111, 112, 116, 117, 118, 119, 122, 123, 126, 129, 130, 131, 150, 152, 154, 95/96abcd, Nursing 112, Nutrition and Foods 15; 16 general education units; experience: 175 days of 3 hours per day within 4 years
4. Master Teacher: 24 units in Early Childhood Education to include: Child Development 3, 9, and one course from Child Development 116, 117, 118, 119; remaining units may be selected from Child Development 107, 108, 110, 111, 112, 116, 117, 118, 119, 122, 123, 126, 129, 130, 150, 152, 154, 95/96abcd, Nursing 112, Nutrition and Foods 15; 6 units specialization; Child Development 31; 16 general education units; experience: 350 days of 3 hours per day within 4 years
5. Site Supervisor: AA Degree with 24 units in Early Child Education to include: Child Development 3, 9, and one course from Child Development 116, 117, 118, 119; 6 units of Program Administration (Child Development 29, 30); remaining units may be selected from Child Development 107, 108, 110, 111, 112, 116, 117, 118, 119, 122, 123, 126, 150, 152, 154, Nursing 112, Nutrition and Foods 15; Child Development 31; experience: 350 days of 3 hours per day within 4 years, including at least 100 days of supervising adults

For further information, please contact a counselor or the Childhood Education Department.

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Child Development 105
(formerly 135)

Parenting in Contemporary Society

3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU

In this course, students will examine the principles and practices of effective parenting for children from birth through adolescence. Historical perspectives of parenting styles and methods will be discussed. Topics will include appropriate techniques for guiding behavior, the influences of school, community, and media in family life, child abuse and prevention, the diverse nature of the family, cultural influences, high risk families, alternative families, and children with special needs. This course is designed for both parents and teachers.

Child Development 107
(formerly 7)

Infant/Toddler Development

3 units; 3 hours lecture
Prerequisite: Child Development 103 with a minimum grade of C
Credit, degree applicable
Transfer CSU

This course focuses on factors affecting the physical, cognitive and psychosocial development of a child from birth to age two-and-a-half. Topics include the effect of the adult-child relationship on an infant's development, practical application of developmental theories in relation to infant/toddler group care, dealing sensitively and effectively with cultural issues in the child care setting, developmentally appropriate environments, curriculum, and state mandated licensing regulations.

Child Development 108
(formerly 8)

The Preschool Child

3 units; 3 hours lecture
Prerequisite: Child Development 103 with a minimum grade of C
Credit, degree applicable
Transfer CSU

This course analyzes developmental patterns of children from two-and-a-half to five years of age with an emphasis on the practical application of theories and principles of development. The course includes a comparison of historical and current philosophies and methodologies of early childhood education. Topics include observation and analysis of child behavior, identification of effective teaching strategies, age appropriate environments, and professional ethics.

Child Development 110
(formerly 10)

Child Health and Safety

3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU

This course is designed to meet the needs of parents, family child care providers and center-based teachers who are interested in increasing their knowledge of health and safety practices for young children. Topics include creating a healthy environment, indoor and outdoor safety, chronic and acute illnesses, accident prevention, health screening, disaster planning, nutrition, contagious diseases, and identifying and working with children with special needs. Students will develop and present health and safety education curriculum appropriate for children, staff and parents.

Child Development 111
(formerly 11)

Pediatric First Aid and CPR

1 unit; 1 hour lecture
Recommended Preparation: Child Development 10
Credit, degree applicable

This course offers students certification in pediatric cardio pulmonary resuscitation (CPR) and first aid which includes, but is not limited to, the assessment and interpretation of emergency situations and safe responses to those situations. The student will learn the proper methods for the control of bleeding and shock, maintenance of airway, breathing and circulation, the care of burns, frost bite, poisonings and other first aid techniques.

Note: Letter grade or P/NP option.
Note: this course satisfies the pediatric CPR and first aid requirements for child care programs under current Title 22 regulations.
Note: This course is repeatable.

Child Development 112
(formerly 12)

Teaching Young Children in Multicultural Classrooms

3 units; 3 hours lecture
Prerequisite: Child Development 103 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU

This course focuses on critical issues in diverse contemporary classrooms and offers strategies and resources needed to teach children effectively. Topics will include: the origins of cultural diversity in American society, the rationale for the need for culturally sensitive educators, the effect of culture on development, models of multicultural education and guidelines for implementing a multicultural program. Students will develop curriculum and activities designed to enhance multicultural experiences for children ages 2-8 in group settings.

Child Development 114
(formerly 34)

Observing and Guiding Children

3 units; 3 hours lecture
Prerequisite: Child Development 103 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU

In this course, students will examine guidance techniques as they apply to children from birth to age twelve in individual and group settings. Students will analyze, through observation and research, common behavioral issues and the possible underlying influences on behavior. The role of the teacher in promoting an environment which fosters appropriate behavior will be examined. Students will be required to conduct observations in local school programs.

Child Development 116
(formerly 16)

Creative Art for Young Children

3 units; 3 hours lecture
Prerequisite: Child Development 103 with a minimum grade of C or equivalent or concurrent enrollment
Credit, degree applicable
Transfer CSU

This course focuses on the principles and methods of planning, presenting, and evaluating creative art experiences for young children ages two to five. Emphasis will be placed on facilitating creativity, self-expression, and concept and skill development through the use of art media such as paint, clay, collage, chalk, and woodworking. Methods for adapting creative art experiences for children with special needs will be discussed. The course is designed for teachers in training and teachers in service needing to develop or refine skills in planning and implementing art curriculum.

Child Development 117
(formerly 17)

Music and Movement for Young Children

3 units; 3 hours lecture
Prerequisite: Child Development 103 with a minimum grade of C or equivalent or concurrent enrollment
Credit, degree applicable
Transfer CSU

This course focuses on the principles and methods of planning, presenting, and evaluating music and movement experiences for young children ages two to five. Activities, such as group singing, rhythmic experiences, perceptual motor, and creative movement, which foster the child's cognitive, psychosocial, and physical development, will be presented. Methods for adapting music and movement experiences for children with special needs will be discussed. The course is designed for teachers in training and teachers in service needing to develop or refine skills in planning and implementing music and movement curriculum.

Child Development 118
(formerly 18)

Science and Math for Young Children

3 units; 3 hours lecture
Prerequisite: Child Development 103 with a minimum grade of C or equivalent or concurrent enrollment
Credit, degree applicable
Transfer CSU

This course focuses on the principles and methods of planning, presenting, and evaluating science and math experiences for young children ages two to five. Students will develop activities that foster children's natural curiosity about scientific and mathematical concepts. These activities will be designed to encourage exploration, experimentation, problem solving, and discovery. Methods for adapting science and math experiences for young children with special needs will also be discussed. This course is designed for teachers in training and teachers in service needing to develop or refine skills in planning and implementing science and math curriculum.

Child Development 119
(formerly 19)

Language Arts for Young Children

3 units; 3 hours lecture
Prerequisite: Child Development 103 with a minimum grade of C or equivalent or concurrent enrollment
Credit, degree applicable
Transfer CSU

This course focuses on the principles and methods of planning, presenting, and evaluating language arts activities for young children ages two to five. Appropriate activities for expressive and receptive language development, such as story telling, dramatic play, listening and emergent literacy, will be examined. Methods for adapting language experiences for children with special needs will be discussed. This course is designed for teachers in training and teachers in service needing to develop or refine skills in planning and implementing language arts curriculum.

Child Development 122
(formerly 45)

Development of the School Age Child

3 units; 3 hours lecture
Prerequisite: Child Development 103 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU

This course focuses on the theories of middle childhood which spans the ages of five through twelve. Emphasis is placed on the interrelationship between the physical, cognitive, and social/emotional domains of development. Topics include family, school, community, diversity, and special needs as they relate to the healthy development of school age children. This course also examines current developmental trends specific to middle childhood. Students will observe in programs that serve school age children.

The hours per week of courses may be adjusted based on the length of the term.

Child Development 123
(formerly 46)

Principles and Practices of School Age Care Programs

3 units; 3 hours lecture
Prerequisite: Child Development 103 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU

This course focuses on the principles and methods of planning, implementing, and evaluating school age programs. The standards for developmentally appropriate practices and effective methods of guiding behavior will be examined. Topics will include adult/child relationships, diversity, environmental assessments, family and community involvement, career opportunities, and issues of advocacy as they relate to school age programs. Students will develop and evaluate curriculum in the areas of math, science, creative art, music, language arts, and physical education. In addition, students will observe in programs that serve school age children.

Child Development 125

Child Development Practicum I

3 units; 2 hours lecture, 3 hours lab to be arranged
Prerequisite: Child Development 103, 104 and one course from Child Development 116, 117, 118 or 119 with a minimum grade of C in each prerequisite course
Credit, degree applicable
Transfer CSU

This course provides a practical application of learning theories in early childhood education programs. Students will have an opportunity to observe and interact with children and staff in supervised child care settings. The course includes methods of working effectively with children, observation and guidance techniques, the role of the preschool teacher and classroom assistant, effective communication with staff and parents, educational requirements and techniques for gaining employment in the field. This course is designed for teachers in training and teachers in service who want to develop or refine their skills.

Child Development 126
(formerly 20)
Child Development Practicum II
3 units; 2 hours lecture, 3 hours lab to be arranged
Prerequisite: Child Development 104, 108, 150 and two courses from Child Development 116, 117, 118, 119 with a minimum grade of C in each prerequisite course. One of these courses may be taken concurrently with Child Development 126
Credit, degree applicable
Transfer CSU
In this course, students will apply and implement developmental teaching theories in an early childhood education setting. The course includes planning, demonstrating, and evaluating learning experiences for children. This course covers aspects of teaching such as strategies for working with children and adults, classroom management skills, program philosophies, and techniques for gaining employment. This course is designed for teachers in training and teachers in service who want to develop or refine their skills.

Child Development 129
(formerly 29)
Introduction to Program Administration
3 units; 3 hours lecture
Prerequisite: None
Credit, degree applicable
Transfer CSU
This course focuses on the regulations, standards and practices for licensed preschool programs established by the California State Department of Social Services. Topics include the role of the program director, interpersonal relationships, public relations, staff recruitment and selection, and community resources.

Child Development 130
(formerly 30)
Principles of Program Administration
3 units; 3 hours lecture
Prerequisite: Child Development 126 with a minimum grade of C or 50 days of preschool teaching experience within the past two years
Credit, degree applicable
Transfer CSU
This course emphasizes the role of the director in child care programs. Topics will include legislative policies, fiscal management, leadership, and professionalism. Effective communication with early childhood staff and strategies for working with parents will also be discussed.

Child Development 131
(formerly 31)
Supervising and Mentoring Adults
2 units; 2 hours lecture
Enrollment Limitation: current or past experience in an early childhood program
Credit, degree applicable
Transfer CSU
In this course students will study the principles and practices of supervising and evaluating staff in early childhood education programs. Emphasis will be placed on the role and responsibilities of experienced classroom teachers who mentor or supervise new teachers and student teachers. Topics will include balancing the needs of children, families and staff, ethics, advocacy, and professionalism in the field.
Note: This course fulfills the adult supervision requirement for the Child Development Permit and the California Early Childhood Mentor Teacher Program.

Child Development 137abcd
(formerly 37abcd)
Mentor Seminar A
0.5 unit; 2.5 hours lecture (4 weeks course)
Enrollment Limitation: current or past experience in an early childhood program
Credit, degree applicable
This course is designed to provide information, guidance and peer support for mentor teachers who are supervising student teachers, beginning teachers and assistants in early childhood education programs. Seminar content will be individualized to meet the professional needs of each mentor. This course meets the professional development requirements for renewal of the Child Development Permit.

Child Development 138abcd
(formerly 38abcd)
Mentor Seminar B
0.5 unit; 2.5 hours lecture (4 weeks course)
Enrollment Limitation: current or past experience in an early childhood program
Credit, degree applicable
This course is designed for early childhood mentor teachers to further explore issues introduced in Mentor Seminar A. Content relates to the role mentoring student teachers, beginning teachers, and assistants in early childhood programs. Additional emphasis will be placed on the role of early childhood professionals. Seminar content will be individualized to meet the needs of each mentor. This course meets professional development requirements for the renewal of the Child Development Permit.

Child Development 139abcd
(formerly 39abcd)
Mentor Seminar C
0.5 unit; 2.5 hours lecture (4 weeks course)
Enrollment Limitation: current or past experience in an early childhood program
Credit, degree applicable
This course is designed for early childhood mentor teachers to further explore issues presented in Mentor Seminar B. Content relates to the role of mentoring student teachers, beginning teachers and assistants in early childhood programs. Additional emphasis will be placed on the role of early childhood educators as advocates and change agents. Seminar content will be individualized to meet the needs of each mentor. This course meets professional development requirements for the renewal of the Child Development Permit.

Child Development 140abcd
(formerly 40abcd)
Mentor Seminar D
0.5 unit; 2.5 hours lecture (4 weeks course)
Enrollment Limitation: current or past experience in an early childhood program
Credit, degree applicable
This course is designed for early childhood mentor teachers to further explore issues discussed in Mentor Seminar C. Content relates to the role of mentoring student teachers, beginning teachers and assistants in early childhood programs. Additional emphasis will be placed on research and communication. Seminar content will be individualized to meet the needs of each mentor. This course meets professional development requirements for the renewal of the Child Development Permit.

Child Development 150
(formerly 4)
Survey of Children with Special Needs
3 units; 3 hours lecture
Prerequisite: Child Development 103 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU
This course offers an overview of the causes, characteristics, prevalence, and needs of children with mild to severe physical, cognitive and behavioral conditions. Topics include the identification of community agencies for referral and case management, inclusion of children with special needs into mainstream classrooms, and the special needs of gifted and talented children. Students will observe local programs that serve children with special needs.

Child Development 152
(formerly 32)
Disabilities in the Developing Child
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU
In this course students will study childhood disabilities, the effects of these conditions on the child's development, and the overall impact on the family system. Topics will include typical and atypical development in the physical, cognitive, social, and emotional domains as well as the recognition, treatment, and care for children with disabling conditions. Students will also explore the role and responsibilities of the classroom special education assistant and the in-home respite care provider.
Note: This course is the same as Nursing 116.

Child Development 154
(formerly 33)
Role and Responsibilities of the Special Education Assistant
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU
This course introduces students to the role and responsibilities of the special education assistant. Students will examine effective communication and problem solving techniques; the disabilities that qualify a child for special education consideration; legal and ethical issues; and methods of adapting the environment and equipment to meet the needs of the children. Students will also examine the role of specialists who work with children with disabilities and observe in classrooms that serve children with special needs.

Child Development 160
Working with Children: Autism Spectrum Disorders
1 unit; 1 hour lecture
Recommended Preparation: Child Development 150 or 152
Credit, degree applicable
Transfer CSU
This course is designed for students interested in working as a paraprofessional with children who have been diagnosed with autism and related disorders. Students will be introduced to the social, emotional, cognitive, and academic needs of these children. The characteristics of effective teaching and the implementation of accommodation strategies in the home and school setting will be explored. The laws governing the rights of children with special needs and their families will be discussed. Students will observe local programs that serve children with autism and related disorders.

Child Development 163
Working with Children: Attention Deficit Disorders
1 unit; 1 hour lecture
Recommended Preparation: Child Development 150 or 152
Credit, degree applicable
Transfer CSU
This course is designed for students interested in working as a paraprofessional with children who have been diagnosed with Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD). The causes, signs, symptoms, treatment, and implications of these disorders as well as the characteristics of effective teaching methods and the implementation of accommodation strategies in the home and school setting will be explored. The laws governing the rights of children with special needs and their families will be discussed. Students will observe local programs that serve children with ADD or ADHD.

Child Development 166
Working with Children: Physical Disabilities/Health Impairments
1 unit; 1 hour lecture
Recommended Preparation: Child Development 150 or 152
Credit, degree applicable
Transfer CSU
This course is designed for students interested in working as paraprofessionals with children with physical disabilities and/or health conditions. Common physical disabilities such as cerebral palsy and spina bifida and other health impairments such as asthma and diabetes will be examined. Students will be introduced to the various types of medical and technological support required for these children during the school day and in the home. Topics will include procedures, equipment, health and safety issues, and the laws governing the rights of children with special needs and their families. Students will observe local programs that serve children with physical impairments or health conditions.

Child Development 169
Special Education Practicum
3 units; 3 hours lecture, 3 hours lab to be arranged
Prerequisite: Child Development 150 or 152; Child Development 104, 107, 108, and 110; Child Development 116 or 117 or 118 or 119 with minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This practicum provides students with supervised experience working with infants, toddlers, and young children with special needs in a variety of early intervention and education settings such as self-contained or fully-included day care programs, regional centers, or early childhood classrooms. Students will assist in the planning and implementation of intervention strategies and will work collaboratively with families as well as early intervention and special education professionals. Students will develop communication skills that are culturally sensitive towards the unique needs of children and families of children with special needs.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Child Development 170A
Family Development I
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU
This is the first course in a two-course professional development series. It is designed for front line family workers who help families work through crises and transitions in their lives. Students will develop and practice skills needed to provide strengths-based support for families in their communities. Topics will include the core principles of the family development approach, communication and assessment techniques, understanding and appreciating diversity and culture, and the development of Family Development Plans. Students will begin development of a portfolio to document their ability to assist families in achieving long-term sustained change. Upon successful completion of Child Development 170A and 170B, students will become eligible to apply for a Family Development Credential.

Child Development 170B
Family Development II
3 units; 3 hours lecture
Prerequisite: Child Development 170A with a minimum grade of C
Credit, degree applicable
Transfer CSU
This is the second course in a two-course professional development series. It is designed for front line family workers who help families work through crises and transitions in their lives. In this course, students will continue to develop and practice skills needed to provide strength-based support for families in their communities. Topics will include building and establishing relationships, personal safety, collaboration, accessing specialized services home visiting, and the local, state and national policies that affect families and the implementation of Family Development Plans. Students will complete a portfolio to document their ability to assist families in achieving long-term sustained change.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Chinese

Chinese 1
Elementary Chinese I
4 units; 5 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU, UC
This beginning course, taught within the context of Chinese culture, introduces students to listening, speaking, reading, and writing elementary Mandarin Chinese. Students develop pronunciation and speaking skills along with their understanding of spoken Chinese. Audio and video tapes are available to reinforce the language skills students acquire in the classroom.
Note: This course is comparable to one year of high school Chinese.

Chinese 2
Elementary Chinese II
4 units; 5 hours lecture
Prerequisite: Chinese 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course, taught within the context of Chinese culture, is a continuation of the study of elementary Mandarin Chinese with an emphasis on listening, speaking, reading, and writing. Students improve their pronunciation and speaking skills along with their understanding of spoken Chinese. Audio and video tapes are available to reinforce the language skills acquired in the classroom.
Note: The prerequisite for this course is comparable to one year of high school Chinese.

Chinese 21ab
Beginning Conversational Chinese
2 units; 2 hours lecture
Prerequisite: Chinese 1 with minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course is designed to develop competency in oral expression, oral comprehension, and conversational strategies. Students will learn how to converse in various situations such as business, travel, and dining within the context of Chinese culture.

Chinese 22ab
Intermediate Conversational Chinese
2 units; 2 hours lecture
Prerequisite: Chinese 2 and Chinese 21ab with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is designed for the intermediate student to develop fluency in oral expression, to increase oral comprehension and to improve pronunciation. Conversational topics are based upon the daily experiences and cultural life of the ethnic areas involved with the language.

Chinese 24
Introduction to Chinese Language and Culture
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course provides an introduction to the cultural aspects of the Chinese language through a study of Chinese culture, geography, social institutions, literature, art, architecture, music, and business. Topics include comparison of Chinese and other Asian languages and cultures as well as comparison with Western languages and civilizations.
Note: This course is conducted in English.

Chinese 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Chinese with a minimum grade of B and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Chinese education not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Chinese education projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

The hours per week of courses may be adjusted based on the length of the term.

Computer Aided Design/Drafting – A.S. Degree and Certificates of Achievement and Accomplishment

(Industry and Technology Division)

The computer aided design/drafting program prepares students for employment in career fields utilizing computer aided drafting (CAD) processes and provides upgrade opportunities for currently employed personnel. By completing the degree or certificate requirements, the student will gain proficiency in sketching, manual and CAD fundamentals, three dimensional design and modeling, and geometric dimensioning and tolerancing. Competencies will be assessed regularly by student performance using industry standard computer hardware and software. Students completing the program may expect to enter industry as CAD draftsperson in mechanical, electronic, or related industrial fields.

El Camino College Major Requirements
At least 50% of the major requirements for the Associate in Science Degree must be completed at El Camino College.
Computer Aided Design/Drafting 5, 10abcd*, 28abcd*, 31abcd*, 32abcd*, 33abcd*, 34abcd*, 37abcd*, 45, 47, 49, Technical Mathematics 1; one course from: Electronics 11, 22, Machine Tool Technology 16ab, 46, 101abcd, Welding 15ab*, Art 141abcd*, 144abcd*, Computer Information Systems 13 (*one semester of)
Total Units: 33-34

Certificate of Accomplishment
A Certificate of Accomplishment will be granted upon completion of the courses listed below.
AutoCAD Mechanical Drafting Trainee
Computer Aided Design/Drafting 5, 10abcd* (*one semester of)
Total Units: 6

Certificate of Achievement
A Certificate of Achievement will be granted upon completion of the courses listed below. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.
Computer Aided Design/Drafting 5, 10abcd*, 28abcd*, 31abcd*, 32abcd*, 33abcd*, 34abcd*, 37abcd*, 45, 47, 49, Technical Mathematics 1; one course from: Electronics 11, 22, Machine Tool Technology 16ab, 46, 101abcd, Welding 15ab*, Art 141abcd*, 144abcd*, Computer Information Systems 13, 20, 22 (*one semester of)
Total Units: 33-34

Communications

Communications 1abcd
Student Leadership
2 units; 1 hour lecture, 2 hours lab to be arranged
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU

This course provides skill building in the areas of time management, goal setting, and listening as they pertain to leadership positions. It also provides education in parliamentary procedure, group dynamics, democratic procedures, and the mechanics of group processes.

Computer Aided Design/Drafting

Computer Aided Design/Drafting 5
Introduction to Mechanical Drafting
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU

This introduction to mechanical drafting covers the basics of creating a technical drawing using both drafting instruments and computer-aided drafting systems. The areas covered in this course include lettering, geometric construction, dimensioning, freehand sketching, orthographic projection, pictorial drawing, primary auxiliary views, sections and working drawings.

Computer Aided Design/Drafting 10abcd
Wireframe with Surfaces, Solid Modeling and Assemblies
3 units; 2 hours lecture, 4 hours lab
Recommended Preparation: Computer Aided Design/Drafting 5 or one year of high school drafting or industry experience
Credit, degree applicable
Transfer CSU, UC

In this course students create three-dimensional (3-D) wireframe and surfaced models, solid models, assembly and two-dimensional (2-D) drawings. Models or assemblies are displayed on a 2-D drawing format and orthographically projected with dimensions added. Shading, rendering and solid model modification is also available in the 2-D mode. Auxiliary, detail and section views are also created with such commands as Solview and Soldraw.

Computer Aided Design/Drafting 28abcd
Advanced Parametric Solid Modeling and Assemblies
2 units; 1 hour lecture; 3 hours lab
Prerequisite: Computer Aided Design/Drafting 10abcd with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU

In this course, students will dimension orthographic two-dimensional (2-D) drawings with detail, auxiliary, and section views. Also, exploded animated assemblies (kinematics) will be created in this class using Inventor Pro software, an Autodesk product.

Computer Aided Design/Drafting 31abcd
Orientation to CATIA
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: Computer Aided Design/Drafting 5 or equivalent; eligibility for English 84
Credit, degree applicable
Transfer CSU

This course provides an orientation to and an overview of the CATIA* CAD/CAM system. (*CATIA is a registered trademark of Dassault Systems.) Emphasis is on system structure and three-dimensional (3-D) geometry creation and manipulation. Most 3-D work is done as solid models based on wire frame profiles created on sketch planes. Basic assemblies and basic drafting techniques are also covered.

Computer Aided Design/Drafting 32abcd
Product Modeling with CATIA
2 units; 1 hour lecture, 3 hours lab
Prerequisite: Computer Aided Design/ Drafting 31abcd with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
In this course, students develop more advanced solid and surface modeling techniques available within CATIA* software with emphasis on its assembly development aspects. (*CATIA is a registered trademark of Dassault Systems.) Functions of the part design, generative shape, and drafting modules are also covered in depth.

Computer Aided Design/Drafting 33abcd
Analysis and Simulations with CATIA
2 units; 1 hour lecture, 3 hours lab
Prerequisite: Computer Aided Design/ Drafting 31abcd with a minimum grade of C or equivalent
Recommended Preparation: Computer Aided Design/Drafting 32abcd or equivalent
Credit, degree applicable
Transfer CSU
This course explores the Functional Dimension and Tolerance (FD&T) aspects of the CATIA* software as well as the "knowledgeware," kinematic analysis, generative stress analysis and other Computer Aided Engineering (CAE) functions. (*CATIA is a registered trademark of Dassault Systems.) Special emphasis is placed on surfacing functions.

Computer Aided Design/Drafting 34abcd
Drafting with CATIA
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: one semester of Computer Aided Design/Drafting 31abcd or equivalent
Credit, degree applicable
Transfer CSU
This course covers the drafting functions of the CATIA software. Students will create and manipulate drafts and auxiliary views using space and draw elements. Dimensioning is also covered.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Computer Aided Design/Drafting 37abcd
Advanced CATIA Functions
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Computer Aided Design/Drafting 31abcd with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This is an advanced course that covers CATIA functions not addressed in other courses. Assembly modeling, rendering, kinematic simulations and advanced analytic functions are presented.

Computer Aided Design/Drafting 45
Geometrical Dimensioning and Tolerancing
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU
This course covers the application and interpretation of geometric dimensioning and tolerancing as prescribed by the American Society of Mechanical Engineers, ASME Y14.5M-1982 standard. It includes tolerance zone generation and interpretation using maximum material condition (MMC), least material condition (LMC), and regardless of feature size (RFS) principles. Also covered are bonus tolerances and tolerances of form, orientation, runout and position. This course emphasizes identification and use of datums and positional tolerances.

Computer Aided Design/Drafting 47
Two Dimensional Mechanical Computer Aided Design/Drafting
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Computer Aided Design/Drafting 10abcd with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This is an intermediate course in two dimensional and design and drafting covering many facets of orthographic projection, dimensioning, sketching, tolerancing, section views, inclined surfaces, shop processes, materials and threaded fasteners. Research, planning and sketching are done manually while all formal drawings are done on a personal computer with appropriate computer aided drafting (CAD) software.

Computer Aided Design/Drafting 49
Advanced Two Dimensional Mechanical Computer Aided Design/Drafting
3 units; 2 hours lecture, 4 hours lab
Prerequisite: one semester of Computer Aided Design/Drafting 10abcd with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This is an advanced course in design and drafting exploring orthographic projection, dimensioning, tolerancing, sketching, oblique planes, assembly drawings, manufacturing processes, hardware selection and raw materials. Design practices of industry are stressed and required of each student. Students will work in teams to complete a design drawing package including concept, layout, detail and assembly drawings. Research, planning and sketching are done manually while all formal drawings are done on a personal computer with appropriate computer aided drafting (CAD) software.

Computer Aided Design/Drafting 50
Special Topics in Computer Aided Design/Drafting
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Computer Aided Design/Drafting more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Computer Aided Design/Drafting 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Computer Aided Design/Drafting field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Computer Aided Design/Drafting 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Computer Aided Design/Drafting with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Computer Aided Design/Drafting not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Computer Aided Design/Drafting projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Computer Hardware Technology

See Electronics and Computer Hardware Technology

Computer Information Systems

Computer Information Systems 3
Introduction to Microcomputer and Software Applications
1 unit; 0.5 hour lecture, 1 hour lab
Credit, not degree applicable
In this course the student is introduced to the capabilities of the microcomputer using word processing and spreadsheets in a hands-on environment. Operation of the microcomputer as a general purpose tool will be stressed.
Note: Letter grade or P/NP option.

Computer Information Systems – A.S. Degree and Certificates of Achievement

(Business Division)

The program is intended for students interested in information systems and can lead to a degree or certificate of competence, and career placement or advancement. A variety of courses will enable students to design graphical user interfaces, perform systems analysis, develop Web pages, spreadsheets, and databases, and implement and maintain LANs (local area networks). Students will demonstrate their proficiency through performance in laboratory exercises and objective examinations. Program assessment is measured by program completion and periodic program review. The program leads to career opportunities as software specialists, Web programmers, database developers, systems analysts, or network administrators.

El Camino College Major Requirements
Computer Information Systems 13, 18, 19; one of the following groups: Computer Information Systems 26 and 28 OR 140 and 141; two of the following courses: Computer Information Systems 16, 27, 29, 30, 80, 133, 134, 142, 143
Total Units: 21-22

Certificates of Achievement
Cisco Networking Administration Option (pending approval by the California Community Colleges System Office): A minimum of nine Computer Information Systems units must be completed at El Camino College.
Computer Information Systems 140, 141, 142, 143; one course from the following: Computer Information Systems 16, 80, 133
Total Units: 15-16
Microcomputer Applications Option: A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 30-34 units.
Computer Information Systems 13, 18, 26, 28, 40; one course from: Computer Information Systems 16 or 133; two courses from: Computer Information Systems 27, 29, 133, 134; two courses from: Business 55, Computer Information Systems 11, 19, 30
Total Units: 30-34
Microcomputer Support and Network Management Option: A minimum of 12 Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 33-34 units.
Computer Information Systems 13, 19, 40, 140, 141, 142, 143; four courses from the following: Computer Information Systems 16, 18, 28, 29, 80
Total Units: 33-34
Web Programming Option (pending approval by the California Community Colleges System Office): A minimum of twelve Computer Information Systems units must be completed at El Camino College and a grade point average of 3.0 (B) is necessary in the required 17-18 units.
Computer Information Systems 30, 133, 134; two courses from: Business 12, Computer Information Systems 28, Law 4 or 5 or 31
Total Units: 17-18

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Computer Information Systems 11
Help Desk Operations
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Computer Information Systems 13 with a minimum grade of C or equivalent experience
Recommended Preparation: Computer Information Systems 19
Credit, degree applicable
Transfer CSU
This course focuses on practical applications related to the process of help desk and end-user support in the field of Information Technology in a variety of organizational settings. Topics include the end-user support function in an organization, techniques to resolve various help desk issues, and strategies to provide ongoing technical support to end-users. Emphasis will be placed on problem solving with users, needs analysis, troubleshooting, and interaction with users.
Note: Letter grade or P/NP option.

Computer Information Systems 13
Introduction to Computers
3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to computers and application software. It is designed as both an introduction and an entry-level overview for other Computer Information Systems classes. The class covers operating systems, computer security, application software, and hardware. Laboratory exercises focus on application software including spreadsheets, word processors, databases, presentation tools, and the use of the Internet. A programming language is used to teach design and logic.

Computer Information Systems 16
Introduction to Visual Basic
3 units; 2 hours lecture, 2 hours lab
Prerequisite: Computer Information Systems 13; Computer Information Systems 26 or 28 with a minimum grade of C in prerequisite or equivalent experience
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to programming. Students will learn how to design interfaces and how to develop Task of Object Event (TOE) charts. Pseudocode and flow charts will then be created and code will be written for the various controls on the interface. Topics such as sequential file access, arrays, and database access will be covered.

Computer Information Systems 18
Systems Analysis and Design
3 units; 2 hours lecture, 2 hours lab
Recommended Preparation: Computer Information Systems 13 or equivalent experience
Credit, degree applicable
Transfer CSU
In this course the student will study structured systems analysis, design, and development as applied to business data processing. Topics emphasize tools of the analyst and the systems development life cycle, which includes problem definition, feasibility study, analysis, process modeling, data modeling, logic modeling, software development choices, and implementation and maintenance of systems.

Computer Information Systems 19
Introduction to the Internet and Web Publishing
3 units; 2 hours lecture, 2 hours lab
Prerequisite: Computer Information Systems 13 with a minimum grade of C or equivalent experience
Credit, degree applicable
This course covers terminology, technology, and software used by the Internet and Web Page Publishing. Different technologies will be compared and evaluated. Students will learn to set up Web pages, use E-mail, search for and evaluate information sources, and use the various conferencing software available on the Internet.

Computer Information Systems 20
Microsoft Windows
1 unit; 0.5 hour lecture, 1 hour lab
Credit, not degree applicable
This course focuses on the use and maintenance of a Windows based computer system and prepares students to set up and protect their home or office computer. Topics include establishing a multi-user environment, setting restore points, backups, disk defragmenting, and protection from spy ware.
Note: Letter grade or P/NP option.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Computer Information Systems 26
Using Spreadsheets
3 units; 2 hours lecture, 2 hours lab
Recommended Preparation: Computer Information Systems 13 with a minimum grade of C or the ability to accurately construct a working spreadsheet which includes labels, values, formulas, and functions
Credit, degree applicable
Transfer CSU
This course is designed for the student who has some initial experience with spreadsheets. In this course spreadsheets are used to solve business and information system problems in a graduated series of laboratory projects. The database, graphics features, macros, and advanced logical and mathematical functions of spreadsheets are also discussed and utilized.

Computer Information Systems 27
Using Spreadsheet Macros
3 units; 2 hours lecture, 2 hours lab
Recommended Preparation: Computer Information Systems 26 or 68 or the ability to construct spreadsheets; Computer Science 5, 10, 20, 25 or 30; or experience in a computer programming language
Credit, degree applicable
Transfer CSU
This course covers macros and the command language structure required to automate spreadsheet operations. The student progresses through a complex series of lab exercises to develop the skills required for general business productivity.

Computer Information Systems 28
Using Database Applications
3 units; 2 hours lecture, 2 hours lab
Recommended Preparation: Computer Information Systems 13 with a minimum grade of C or the ability to solve business problems using pseudocode or logic flow diagrams
Credit, degree applicable
Transfer CSU
This course offers introductory instruction in the use of relational database management systems within a Windows environment. Applications used for typical business activities such as inventory, sales, personnel, and finance will be presented.

Computer Information Systems 29
Advanced Database Applications
3 units; 2 hours lecture, 2 hours lab
Prerequisite: Computer Information Systems 28 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course offers the student advanced instruction in programming and command level activities. Such topics as the following will be covered: macro substitution and parameters passing; user defined functions; two dimensional arrays; master file update; file recovery; password protection; procedure files; multiple relations; data input validation; import/export of foreign files; conventional horizontal, pop-up and lightbar menus, and advanced report and label generation.

Computer Information Systems 30
Introduction to eCommerce
3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: Computer Information Systems 13; eligibility for English 84
Credit, degree applicable
Transfer CSU
This introductory course will acquaint the student with fundamentals of eCommerce. The primary focus will be the study of current eCommerce practices, business models, techniques and opportunities for conducting business via the Internet. This course will help to prepare students for employment as web masters, Web site designers, and eCommerce business managers.
Note: Letter grade or P/NP option.

Computer Information Systems 40
Microcomputer Operations
3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: Computer Information Systems 13 plus one other microcomputer course or equivalent experience
Credit, degree applicable
Transfer CSU, UC
In this course students will become familiar with managing and supporting microcomputers within an organization. The class will emphasize both computer hardware and applications software. Topics covered will include microcomputer concepts, computer devices, hardware management, applications and operating system software installation and setup, and ethical concerns within the information systems environment.

Computer Information Systems 50
Special Topics in Computer Information Systems
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Computer Information Systems more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Computer Information Systems 80
Oracle Application Programming
4 units; 3 hours lecture, 2 hours lab
Prerequisite: Computer Information Systems 28 with a minimum grade of C or equivalent experience in database design
Credit, degree applicable
Transfer CSU, UC
The effective and efficient use of an application programming language is introduced and developed in lectures and reinforced through a series of lab projects of increasing complexity. Programming techniques will include building and manipulation of tables as used in modern business.

Computer Information Systems 95/96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Computer Information Systems field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

The hours per week of courses may be adjusted based on the length of the term.

Computer Information Systems 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Computer Information Systems with a minimum grade of B in each and acknowledgement by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides special advanced studies in the field of Computer Information Systems not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Computer Information Systems projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Computer Information Systems 133
Web Programming Concepts
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Computer Information Systems 13 or Computer Information Systems 19 or equivalent experience
Credit, degree applicable
Transfer CSU
Students examine the fundamental concepts and structures of programming for the Web using client-side mark-up languages and scripting languages. Students learn how to use standard documentation, testing and debugging techniques, and Web-based programming tools such as conditional structures, variables, classes, objects, functions, events, arrays, windows, and forms in order to create eBusiness applications. Additional topics include the introduction to XML, databases as used in the development of Web-based programming, and utilizing Web services.
Note: Letter grade or P/NP option.

Computer Information Systems 134

Web Programming

4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Computer Information Systems 133 or equivalent experience
Credit, degree applicable
Transfer CSU

This introductory programming course incorporates the basic concepts of Web programming, problem solving, programming logic, and design techniques using Microsoft.Net Web programming languages. The student will be able to obtain information from an e-client and send information to the e-client by building dynamic data-driven Web applications. Skills will be applied to the creation of a Web Service. Emphasis is placed on emerging Web programming skills and technologies to prepare students for advanced programming applications and to enter the eBusiness industry.

Note: Letter grade or P/NP option.

Computer Information Systems 140

Data Communications Cisco 1

3 units; 2 hours lecture, 2 hours lab
Prerequisite: Computer Information Systems 13 with a minimum grade of C or equivalent experience
Recommended Preparation: Computer Information Systems 40
Credit, degree applicable
Transfer CSU

In this class, students will become familiar with the terminology and technology used in data communications. The class uses concepts of both hardware and software in order to understand principles of communications theory. This class is technically oriented and may be appropriate for industry certification programs.

Computer Information Systems 141

Networking Microcomputers Cisco 2

3 units; 2 hours lecture, 2 hours lab
Prerequisite: Computer Information Systems 140 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU

In this class students will become familiar with the terminology and technology used to design and build local area networks. The class uses concepts of hardware, software, design and management techniques to implement computer networks for business.

Computer Information Systems 142

Implementing and Administering Network Routers Cisco 3

3 units; 2 hours lecture, 2 hours lab
Prerequisite: Computer Information Systems 141 with a minimum grade of C or equivalent (Successful completion of Cisco CCNA "semesters" 1 and 2 is an equivalent.)
Credit, degree applicable
Transfer CSU

This course provides instruction in installing and maintaining network routers. The course will provide hands-on experience in diagnosing and replacing router components.

Note: Letter grade or P/NP option.

Computer Information Systems 143

LAN and WAN Router Configurations Cisco 4

3 units; 2 hours lecture, 2 hours lab
Prerequisite: Computer Information Systems 142 with a minimum grade of C or equivalent (Successful completion of Cisco CCNA "semesters" 1, 2, and 3 is an equivalent.)
Credit, degree applicable
Transfer CSU

This course provides a study of routers and their configuration in multi-protocol internetworks. Students will learn to design and build a multi-router and multi-group internetwork that use local and wide area network interfaces for the most commonly used routing and routed protocols.

Note: Letter grade or P/NP option.

Computer Related Programs

El Camino College offers courses in computer applications in industry, Computer Information Systems, and Computer Science.

Computer Applications in Industry

The Industry and Technology Division offers a number of courses in computer applications in industry and computer technology. From design and drafting to machine tools controlled by computers, each course is designed to prepare the student for employment with the skills and techniques needed for today's competitive workplace. Refer to Computer Aided Design/Drafting and Machine Tool Technology for course listings. For those interested in the internal workings of computer hardware technology, refer to the many related courses in Electronics and Computer Hardware Technology.

Computer Information Systems

The Business Division offers Computer Information Systems courses for students interested in a Computer Information Systems Associate of Science degree or Certificate of Achievement, transfer to a four-year school, and career placement or advancement. At four-year institutions, these courses may be listed under the following headings: Computer Information Systems, Information Systems or Management Information Systems. The courses offered cover major commercial programming languages such as Oracle and Visual Basic.Net and application packages such as EXCEL, Word, Access, and FrontPage. The hardware used includes various PC microcomputer systems. Students desiring a knowledge of information processing systems as a programmer, analyst, computer operator, application software user, or for transfer to a four-year college/university should refer to the course listings under the Computer Information Systems section of this catalog. The introductory level course is Computer Information Systems 13.

Computer Science

The Mathematical Sciences Division offers Computer Science courses which are designed primarily for students who wish to transfer to a four-year institution with a major in Computer Science, Physics, Mathematics, Engineering, or another technical major which will be concerned with the study or application of computer concepts. The courses offered provide instruction in high-level languages such as PASCAL, FORTRAN, and C++, PC assembly languages, and advanced programming concepts. It should be noted that most Computer Science courses have a mathematics prerequisite. Refer to the course listings in the Computer Science section of this catalog and the schedule of classes for specific information.

Computer Science

Computer Science 1
Problem Solving and Program Design Using C++
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Mathematics 170 with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to problem solving and program design using structured, top-down algorithmic development techniques applied to the solution of numeric and nonnumeric problems. Software engineering topics such as analysis, design, implementation, testing, documentation, and maintenance of software are discussed. Laboratory work will be done using the C++ computer language.

Computer Science 2
Introduction to Data Structures
5 units; 4 hours lecture, 3 hours lab
Prerequisite: Computer Science 1 with a minimum grade of C
Recommended Preparation: Mathematics 190
Credit, degree applicable
Transfer CSU, UC
This course includes a thorough coverage of pointer variables, function pointers, and structures and classes with member functions. Students will learn elementary data structures concepts, including stacks, queues, linked lists, dynamic memory allocation, recursion, binary trees, sorting and searching algorithms, efficiency considerations, and general top-down program design and object oriented programming methods.

Computer Science 3
Computer Programming in Java
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Computer Science 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course includes a detailed coverage of the Java programming language including Java data types, operators and expressions, control structures, iterations, functions, arrays, classes and inheritance, files, graphical user interface (GUI) applications with event handling, and applets for world wide Web applications.
Note: This course is only offered in the fall semester.

Computer Science – A.S. Degree and Certificate of Achievement

(Mathematical Sciences Division)

By completing the degree or certificate requirements, the student will apply program design principles and will acquire an understanding of data structures and their applications for an analysis and solution of numeric and non-numeric problems. The student will write programs using the C, C++, and assembly computer languages. All courses have a mandatory computer laboratory component requiring students to apply knowledge of the concepts from the lecture. Competencies are assessed regularly through examinations in the lecture component and through evaluation of computer laboratory activities.

Certificate of Achievement
A Certificate of Achievement will be awarded to the student who completes the following courses: Computer Science 1, 2; three courses from Computer Science 3, 4, 10*, 15P, 23, 25*, 30, 36, 40, 55, 60, Mathematics 210. (*Only one course from Computer Science 10 or 25 may be counted toward the certificate.) At least 17 units for this certificate must be completed at El Camino College.
Total Units: 21

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Computer Science 4
Computer Science Programming in C#
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Computer Science 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course will introduce the student to the C# (C Sharp) computer programming language and the .NET framework. Students will write computer science programs using the C# language. Associated topics in the .NET framework will also be covered.

Computer Science 10
Computer Programming with FORTRAN
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Mathematics 190 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to elementary numerical methods using the FORTRAN Language. Topics include algebraic equation solvers, numerical differentiation and integration, evaluation of determinants, matrix solutions of linear systems of equations, and prime number generators. Laboratory work is conducted on IBM compatible personal computers.
Note: You must have satisfied the course prerequisite at El Camino College or another accredited college. A transcript or grade slip is required for verification of a grade from another college.
Note: This course is only offered in the fall semester.

Computer Science 30
Advanced Programming in C++
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Computer Science 2 with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course presents an advanced coverage of the C++ programming language. Topics presented include templates, the Standard Template Library, data abstraction, operator overloading, inheritance, friend functions, virtual functions, multiple inheritance, and virtual base classes. An emphasis will be placed on object-oriented programming.
Note: This course is only offered in the spring semester.

Computer Science 40
Introduction to UNIX and LINUXOperating Systems
4 units; 3 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course covers UNIX and LINUX operating system concepts and include basic commands, file structures, editors, file management utilities, shell programming, process control, and remote messaging as well as network and system administration.
Note: Letter grade or P/NP option.

Computer Science 50
Special Topics in Computer Science
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Computer Science more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Computer Science 60
Programming with ASP.NET and C# in Web Based Computer Science Applications
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Computer Science 2, 3, 4 or 30 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This course introduces students to Web based programming using ASP.NET, C#, and object-oriented programming. Students will learn ASP.NET's Web forms, Web controls, custom controls, and data binding. Additional topics include ASP.NET class hierarchy and C# inheritance. In the computer laboratory, students will create computer science Web applications, such as a scientific Web calculator.

Computer Science 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: completion of two courses in Computer Science with a minimum grade of B in each course and acknowledgement by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Computer Science not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned computer laboratory and research projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

The hours per week of courses may be adjusted based on the length of the term.

Construction Technology – A.S. Degree and Certificates of Achievement

(Industry and Technology Division)

By completing the degree or certificate requirements, students acquire proficiency in basic residential construction techniques and in analyzing, evaluating, and providing solutions for a variety of job site situations. Students will be able to interpret blueprints, estimate materials, lay out, and construct a basic residential structure in accordance with Uniform Building Code requirements. Competencies are assessed regularly by student performance in the construction technology laboratory. The program provides career opportunities in various aspects of construction, including carpentry, cabinetmaking, furniture making, a variety of subcrafts, and contracting. Completion of the degree or certificate requirements qualifies students to receive a maximum of two years credit applicable toward the California State Contractor's License Board experience requirement.

El Camino College Major Requirements
At least 50% of the major requirements for the Associate of Science degree must be completed at El Camino College.
Construction Technology Option:
Complete the following: Construction Technology 100, 110, 107abcd* (* one semester); a minimum of 24 units from the following: Architecture 180, Construction Technology 105, 121, 122, 131, 132, 141, 142, 150, 160, 172, 180
Recommended Electives: Architecture 150A, Business 17, Computer Information Systems 13, Construction Technology 95abcd, Technical Mathematics 1
Total Units: 34
Cabinet and Fine Woodworking Option:
Complete the following: Construction Technology 107abcd*, 108abcd*, 109abcd* (*four semesters); one course from the following: Architecture 150A, Business 17, Computer Aided Design/Drafting 5, Computer Information Systems 13, Construction Technology 95abcd (2-4 units), 100, 110, Machine Tool Technology, 13A, Technical Mathematics 1
Total Units: 24-26

Certificates of Achievement
A Certificate of Achievement will be granted upon completion of the required courses in one of the following options, Construction Technology or Cabinet and Fine Woodworking. At least 50% of the courses for the Certificate of Achievement must be completed at El Camino College.
Construction Technology Option:
Complete the following: Construction Technology 100, 110, 107abcd* (*one semester of); a minimum of 24 units from the following: Architecture 180, Construction Technology 105, 121, 122, 131, 132, 141, 142, 150, 160, 172, 180, 95abcd* (* 2-4 units)
General Requirements: English A or qualifying score for English 1A on English Placement Test, Technical Mathematics 1
Total Units: 37-40
Cabinet and Fine Woodworking Option:
Complete the following: Construction Technology 107abcd*, 108abcd*, 109abcd* (*four semesters); one course from the following: Architecture 150A, Business 17, Computer Aided Design/Drafting 5, Computer Information Systems 13, Construction Technology 95abcd (2-4 units), 100, 110, Machine Tool Technology 13A, Technical Mathematics 1
Total Units: 24-26

Construction Technology

Construction Technology 50
Special Topics in Construction Technology
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Construction Technology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Construction Technology 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Construction Technology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Construction Technology 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Construction Technology with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Construction Technology not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Construction Technology projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Construction Technology 100
Building Fundamentals
4 units; 2.5 hours lecture, 5 hours lab
Credit, degree applicable
Transfer CSU
This course is an introduction to the fundamentals of the building trades. Topics of instruction include: building codes, construction mathematics, rough framing, and technical information on materials and methods of residential construction. Practical instruction is given in the use of tools and materials through construction laboratory work.

Construction Technology 105
Residential Light Steel Framing
2 units; 1.25 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU
This course is an introduction to the fundamentals of light frame for residential framing. Instruction includes: raised floor construction, wall framing, trussed roof fabrication and installation, and applicable building codes and blueprint reading. The fundamentals are learned through laboratory work which requires the use of standard construction tools and materials.

Construction Technology 107abcd
Cabinet and Furniture Making
2 units; 1 hour lecture, 3 hours lab
Credit, degree applicable
Transfer CSU
This course is the study of the elements of cabinet and furniture design. Properties of wood and wood products, fabrication and installation of house cabinets, and fabrication of furniture will be covered.
Note: Class expenses will be determined by each student's personal project.

Construction Technology 108abcd
Advanced Cabinet Making Laboratory
1 unit; 3 hours lab
Prerequisite: two semesters of Construction Technology 107abcd with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course is designed to allow students the opportunity to develop advanced skills levels in the design and fabrication of cabinets. Emphasis will be placed on the use of jigs, fixtures, and production techniques. The latest hardware and fastening techniques will be explored extensively.
Note: The expense of the class to the student will be determined by the personal project of the student and approved by the instructor.

Construction Technology 109abcd
Application and Installation of Euro Style Hardware
2.5 units; 1.5 hours lecture, 3 hours lab
Prerequisite: one semester of Construction Technology 107abcd with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course covers the principles and operation of hinge mortising line boring machines with emphasis on Euro Style hardware.

Construction Technology 110
Additions and Remodeling
4 units; 2.5 hours lecture, 5 hours lab
Credit, degree applicable
Transfer CSU
This course is an introduction to the fundamentals of residential remodeling and additions. Instruction includes: planning and design, permit process, blueprint reading, and building codes. Practical instruction is given in the use of tools and materials through construction laboratory work.

Construction Technology 121
Concrete and Formwork
4 units; 2.5 hours lecture, 5 hours lab
Prerequisite: Construction Technology 100 or 110 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This is an advanced course in Construction Technology covering concrete and formwork. Topics of instruction include the Uniform Building Code (UBC) requirements, construction mathematics, house layout, blueprint reading, formwork, use of leveling instruments and estimating. Practical instruction is given in the use of tools and materials through construction laboratory work.

Construction Technology 122
Rough Framing
4 units; 2.5 hours lecture, 5 hours lab
Prerequisite: Construction Technology 100 or 110 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This is an advanced course in Construction Technology covering rough framing. Topics of instruction include materials and methods of residential rough framing construction, rough lumber estimating, and Uniform Building Code (UBC) requirements. Practical instruction is given in the use of tools and materials through construction laboratory work.

Construction Technology 131
Roof Framing
4 units; 2.5 hours lecture, 5 hours lab
Prerequisite: Construction Technology 100 or 110 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This is an advanced course in Construction Technology covering residential roof framing. Topics of instruction include roof structures, calculation and layout of various rafters, Uniform Building Code (UBC) requirements, roof construction, and estimating. Practical instruction is given in the use of tools and materials through construction laboratory work.

Construction Technology 132
Stair Framing
4 units, 2.5 hours lecture, 5 hours lab
Prerequisite: Construction Technology 100 or 110 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This is an advanced course in Construction Technology covering residential stair framing. Topics of instruction include stair design, calculations, layout, and construction. Practical instruction is given in the use of tools and materials through construction laboratory work.

Construction Technology 141
Interior Subcrafts
4 units; 2.5 hours lecture, 5 hours lab
Prerequisite: Construction Technology 100 or 110 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This is an advanced course in Construction Technology covering interior subcrafts. Topics of instruction include door hanging, drywall installation and finishing, ceramic tile setting, Uniform Building Code (UBC), and estimating. Practical instruction is given in the use of tools and materials through construction laboratory work.

Construction Technology 142
Exterior Subcrafts
4 units; 2.5 hours lecture, 5 hours lab
Prerequisite: Construction Technology 100 or 110 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This is an advanced course in Construction Technology covering exterior subcrafts. Topics of instruction include window installation, exterior lath, stucco application and texturing, siding, concrete blocks, Uniform Building Code (UBC), and estimating. Practical instruction is given in the use of tools and materials through construction laboratory work.

Construction Technology 150
Contract Estimating
3 units; 3 hours lecture
Recommended Preparation: completion of 12 units of Construction Technology or a minimum of 3 years of construction work experience
Credit, degree applicable
Transfer CSU
This course covers building estimating, bidding procedures, blueprint reading, and the uniform building code. It is for persons in the building trades who desire to advance to a supervisory position or to become a contractor.

Construction Technology 160
Business and Legal Aspects of Contracting
3 units; 3 hours lecture
Recommended Preparation: completion of 12 units of Construction Technology or a minimum of 3 years of construction work experience
Credit, degree applicable
Transfer CSU
This course is designed for those with construction backgrounds who desire to advance to a supervisory position or become contractors. Topics include: the legal and business aspects of a contracting organization, Contractor's License Law, Lien Laws, labor code, payroll deductions, business organization and planning, and management principles.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Construction Technology 172
Residential Electrical Wiring
4 units; 2.5 hours lecture, 5 hours lab
Credit, degree applicable
Transfer CSU
This course focuses on residential electrical wiring in accordance with the National Electric Code (NEC). Topics covered include blueprint reading, developing wiring diagrams, wiring, grounding, and the placement of lights, switches, receptacles and fixtures. The proper selection and use of conduits, the determination of branch circuit requirements, the proper selection of circuit breakers and the installation of service entrance and sub-panels are also covered. The techniques of electrical wiring are learned through construction laboratory work which requires the use of standard electrical tools and materials.

Construction Technology 180
Residential Plumbing
4 units; 2.5 hours lecture, 5 hours lab
Credit, degree applicable
Transfer CSU
This course covers the layout and fabrication techniques needed to erect a water and waste plumbing system for a residence. Students apply appropriate methods and procedures by selecting proper size pipes, fittings, fixtures and accessories and install and test various fixtures and systems. Other topics include the diagnosing, troubleshooting and clearing of stoppages in a plumbing system.

Contemporary Health

Contemporary Health 1
Personal and Community Health Issues
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
Transfer CSU, UC
This class is designed to provide a critical analysis of factors which affect personal and community health. Primary emphasis is placed upon self-empowerment and disease prevention in a culturally diverse community. General topics include communicable and non-communicable diseases, physical fitness, weight management and nutrition; human reproduction and sexuality; stress management and mental health; drug use and abuse; and environmental health.
Note: This course satisfies Section A, Area 5 of the associate degrees' requirements.

Contemporary Health 3
Drugs and Alcohol in Society
2 units; 2 hours lecture
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
Transfer CSU
This course provides students with an in-depth study of substance abuse ad chemical dependency in our society. The course focuses on the analysis of root causes of substance abuse and identification of abused drugs. Short and long term effects of drug abuse, assessment of educational and treatment options, as well as the psychosocial role of the family, will be examined.

Contemporary Health 50
Special Topics in Contemporary Health
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Contemporary Health more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Contemporary Health 96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Contemporary Health field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Cooperative Work Experience Education
(Work Experience and Internship Credit)

Cooperative Work Experience Education (CWEE) is a course designed for students who are looking for upward mobility or possible career changes at their current jobs, as well as those looking for entry-level occupational training through work-based learning experiences and internships. CWEE uses the entire community as the laboratory allowing students to apply theoretical information learned in the classroom to practical problems at work. It enables students to compare their personal goals and expectations with specific career requirements and to learn from professionals and technical experts working in their career field.

Interested students must be employed or volunteering in a job directly related to their major or career goal and concurrently enrolled or have completed a class in that major. Employers must be willing to let students engage in new learning experiences at work and be willing to assist CWEE instructors in the preparation of learning objectives/evaluations. CWEE students must enroll in a minimum of 7 units (including CWEE). Students not enrolled in 7 units should contact the appropriate Academic Affairs Division Office.

Credit is awarded on the basis of objectives completed and the number of hours worked. The student needs a minimum of 150 hours of paid work or 120 hours of volunteer work for each semester enrolled in CWEE. Up to 16 units may be used for elective credit for an AA/AS degree and 8 units will transfer to CSU.

The following scale reflects the equivalent units for hours worked:
2 units = 10 hours worked per week
3 units = 15 hours worked per week
4 units = 20 hours worked per week

How to Enroll:
- To register for the appropriate CWEE section students must first fill out a CWEE application and contact the CWEE instructor by the second week of the semester. (CWEE sections are located in the Schedule of Classes.)
- Complete an *Application for Cooperative Work Experience Education* available in the Division Offices.
- Purchase a *Cooperative Work Experience Education Student Handbook* from the Student Bookstore. Read the Handbook and complete the *Learning Objectives* agreement.
- Meet with your CWEE instructor before the end of the second week to discuss the course requirements. Instructors are available through the appropriate Division Offices.

Cooperative Work Experience Education is offered in the following areas:
Behavioral and Social Sciences: Available in the area of Childhood Education.
Business: Available in the area of Paralegal Studies.
Fine Arts: Available in the areas of Art, Dance, Film/Video, Music, and Theatre.
Health Sciences and Athletics: Available in the area of Nursing.
Humanities: Available in the area of Journalism.
Industry and Technology: Available in the areas of Administration of Justice, Air Conditioning and Refrigeration, Architecture, Automotive Collision Repair/Painting, Automotive Technology, Computer Aided Design/Drafting, Construction Technology, Cosmetology, Electronics and Computer Hardware Technology, Environmental Technology, Fashion, Fire and Emergency Technology, Machine Tool Technology, Quality Assurance, and Welding.
Natural Sciences: Available in the area of Environmental Horticulture.

Contracting
See Construction Technology

Cosmetology – A.S. Degree and Certificates of Achievement and Accomplishment

(Industry and Technology Division)

The cosmetology program offers students to the option to gain proficiency in hair cutting, coloring, permanent waving, chemical relaxing, manicuring, pedicuring, and facials. After completing introduction to cosmetology, Cosmetology Level I (Certificate of Accomplishment), students will have the basic skills for entry level positions as specified by the State Board of Cosmetology. Cosmetology Level II (Certificate of Achievement) will give the student intermediate skills to work in the cosmetology industry. Completion of Cosmetology Level III (Certificate of Achievement) will give students 1600 hours and prepares them to take the California State Board of Cosmetology Examination. Competencies are assessed regularly in compliance with the California State Board of Cosmetology criteria. After successful completion of the California State of Board of Cosmetology Examination, students will have a state license to embark on their new career.

El Camino College Major Requirements
Completion of a minimum of 37-46.5 units (1,600 hours) from:
Day Program: Cosmetology 1, 2abcd* (*minimum of two semesters), 3
Evening Program: Cosmetology 10, 11, 12, 13, 14abcd, 16abcd
Total Units: 37-46.5

Certificate of Achievement
A Certificate of Achievement will be granted upon completion of the courses listed below. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.
Cosmetology Level II (pending approval by the California Community Colleges System Office): complete 16-17 units from Cosmetology 1, 10, 11; and complete 16-17 units from Cosmetology 2abcd, 12, 13
Total Units: 32-34
Cosmetology Level III: complete 16-17 units from Cosmetology 1, 10, 11; and complete 16-17 units from Cosmetology 2abcd, 12, 13; and complete 10-11 units from a combination of the following: Cosmetology 2abcd, 3, 4, 13, 14abcd, 16abcd
Total Units: 42-45

Certificate of Accomplishment
A Certificate of Accomplishment will be granted upon completion of the courses listed below. At least 50% of the courses required for the Certificate of Accomplishment must be completed at El Camino College.
Cosmetology Level I: complete 16-17 units from Cosmetology 1, 10, 11
Total Units: 16-17

Cosmetology

Cosmetology 1
Introduction to Cosmetology Procedures
16 units; 6 hours lecture, 30 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course covers the study of basic principles and practical operations of cosmetology equipment, procedures and techniques. It is designed as an intensive, multi-disciplinary workshop in the most common cosmetology processes. Lectures center on the fundamental theories of the practice of cosmetology and their application. Laboratory work is designed to support, with practical application, the basic cosmetology student with an intensive forum for development of basic cosmetology skills, techniques, safety practices, and sanitation procedures.
Note: Students who have earned credit in Cosmetology 10 and 11 cannot receive unit credit for Cosmetology 1.

Cosmetology 2abcd
Advanced Cosmetology Procedures
8 units; 3 hours lecture, 15 hours lab
Prerequisite: Cosmetology 1 with a minimum grade of C or completion of 399 hours at a school licensed by the State Board of Cosmetology
Credit, degree applicable
Transfer CSU
This course covers the principles and practical operations of cosmetology equipment, procedures and techniques. It is designed as an intensive, multi-disciplinary workshop in the most common cosmetology processes. Lectures center on the fundamental theories of the practice of cosmetology and their application. Laboratory work is designed to support the cosmetology student with an intensive forum for development of cosmetology skills, techniques, safety practices and sanitation procedures.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Cosmetology 3
Advanced Cosmetology Applications
5 units; 4 hours lecture, 28 hours lab (8 weeks course)
Prerequisite: Cosmetology 1 with a minimum grade of C or 399 hours from a State approved cosmetology program
Credit, degree applicable
This course covers advanced principles and practical operations of cosmetology equipment, procedures and techniques. It is designed as an intensive, multi-disciplinary course which focuses on the most common cosmetology processes. Lectures center on the advanced theories of the practice of cosmetology and their application. Laboratory work is designed to support with practical application, the advanced cosmetology student with an intensive forum for development of advanced cosmetology skills, techniques, safety practices and sanitation procedures.

Cosmetology 4
Cosmetology Practicum
0.5 - 10 units; 4.5-90 hours lecture, 13.5-270 hours lab
Prerequisite: Cosmetology 3 or Cosmetology 14 with a minimum grade of C in prerequisite
Credit, not degree applicable
This course is designed for the student who has completed the daytime or evening cosmetology course series and lacks hours for the State Board of Cosmetology examination. The focus of this class is on the advanced principles and practical operations of cosmetology equipment, procedures and techniques.
Note: This course is repeatable

Cosmetology 10
Introduction to Cosmetology I
8.5 units; 4 hours lecture, 14 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This is the first of a two-course introductory series covering the principles and practical operations of cosmetology techniques, procedures, and equipment for wet and thermal styling, permanent waving, chemical straightening, hair coloring, and scalp treatments. This is the first course in a sequence of courses that prepares students for the State Board of Cosmetology examination and employment.
Note: Students who have earned credit in Cosmetology 1 cannot receive unit credit for Cosmetology 10.

Cosmetology 11
Introduction to Cosmetology II
8.5 units; 4 hours lecture, 14 hours lab
Prerequisite: Cosmetology 10 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This is the second of a two-course introductory series covering the principles and practical operations of cosmetology techniques, procedures, and equipment for wet and thermal styling, permanent waving, chemical straightening, hair coloring, scalp treatments, facials, and manicuring and pedicuring. This is the second course in a sequence of courses that prepares students for the State Board of Cosmetology examination and employment.
Note: Students who have earned credit in Cosmetology 1 cannot receive unit credit for Cosmetology 11.

Cosmetology 12
Intermediate Cosmetology
8.5 units; 4 hours lecture, 14 hours lab
Prerequisite: Cosmetology 11 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This is an intermediate course covering the principles and practical operations of cosmetology techniques, procedures, and equipment. Topics include wet and thermal styling, permanent waving, chemical straightening, hair coloring, scalp treatments, facials, and manicuring and pedicuring. This is the third course in a sequence of courses that prepares students for the State Board of Cosmetology examination and employment.

Cosmetology 13
Advanced Cosmetology I
8.5 units; 4 hours lecture, 14 hours lab
Prerequisite: Cosmetology 12 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This is the first of a two-course advanced series covering the principles and practical operations of cosmetology techniques, procedures, and equipment. Topics include wet and thermal styling, permanent waving, chemical straightening, hair coloring, scalp treatments, facials, and manicuring and pedicuring. This is the fourth course in a sequence of courses that prepares students for the State Board of Cosmetology examination and employment.

Cosmetology 14abcd
Advanced Cosmetology II
8.5 units; 4 hours lecture, 14 hours lab
Prerequisite: Cosmetology 13 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This is the second of a two-course advanced series covering the principles and practical operations of cosmetology techniques, procedures, and equipment. Topics include wet and thermal styling, permanent waving, chemical straightening, hair coloring, scalp treatments, facials, and manicuring and pedicuring. This is the fifth and final course in a sequence of courses that prepares students for the State Board of Cosmetology examination and employment.

Cosmetology 16abcd
Cosmetology Applications
4 units; 1.5 hours lecture, 7.5 hours lab
Prerequisite: Cosmetology 1 or 10 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This course covers the study of intermediate principles, procedures, techniques, and practical operations of cosmetology equipment. It is designed as an intensive, multidisciplinary workshop in the most common cosmetology processes. Lectures center on the theories of the practice of cosmetology and their application. Laboratory work is designed to provide the student with a forum for development of intermediate cosmetology skills, techniques, safety practices and sanitation procedures.

Cosmetology 50
Special Topics in Cosmetology
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Cosmetology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

The hours per week of courses may be adjusted based on the length of the term.

Cosmetology 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Cosmetology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Cosmetology 99abc
Independent Study in Cosmetology
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Cosmetology with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
This course provides special advanced studies in a subject field of Cosmetology not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Cosmetology projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Cosmetology 103
Introduction to Manicuring Arts
9 units; 3 hours lecture, 18 hours lab
Credit, degree applicable
This course covers the principles of manicuring, artificial nails, nail wraps and nail repairs, spa treatments, reflexology, and paraffin treatments. Laboratory work is designed to support practical applications and prepares the student for State Board Manicuring examination.

Criminal Justice
See Administration of Justice

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Culinary Arts

Culinary Arts 1
Introduction to the Hospitality Industry
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
This course is an overview of the hospitality industry with emphasis on culinary arts and career opportunities in various food service operations and is required for the American Culinary Federation Educational Institute (ACFEI) certification. Topics include legal regulations, management, public relations, history and cultural aspects of the culinary arts.

Culinary Arts 3
Sanitation and Safety
2 units; 2 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
This course covers effective management of sanitation practices to comply with regulatory standards. The Hazard Analysis Critical Control Point (HACCP) system to prevent food borne illnesses for important operations (cooking, cooling, hot holding and reheating) which are critical control points for food safety is a primary subject of this course. Other topics include the importance of employee health screening and general safety precautions. This course is required for the American Culinary Federation Educational Institute (ACFEI) Certificate.

Culinary Arts 5A
Quantity Food Preparation
3 units; 1 hour lecture, 6 hours lab
Recommended Preparation: eligibility for English 84
Enrollment Limitation: valid negative Tuberculosis (TB) test
Credit, degree applicable
This course covers the fundamentals of food preparation and cookery emphasizing high standards of production. Student will prepare beverages, stocks, soups, gravies, vegetables, fruits, salads, desserts, meat, fish and poultry, breads, cakes and icings. This course is required for the American Culinary Federation Educational Institute (ACFEI) Certificate.

Culinary Arts 5B
Food Preparation Management
3 units; 1 hour lecture, 6 hours lab
Prerequisite: Culinary Arts 5A with a minimum grade of C
Enrollment Limitation: valid negative Tuberculosis (TB) test
Credit, degree applicable
This course is an advanced study of food preparation. Highlights include management of time, labor, food and equipment; purchasing and cost control; advanced food preparation techniques; food presentation and merchandising. This course is required for the American Culinary Federation Educational Institute (ACFEI) Certificate.

Culinary Arts 10A
Baking Techniques I
2 units; 1 hour lecture, 3 hours lab
Prerequisite: Culinary Arts 5A with a minimum grade of C
Enrollment Limitation: valid negative Tuberculosis (TB) test
Credit, degree applicable
This course covers the fundamentals of baking, including ingredient composition and function; recipe conversion, preparation and evaluation of pie doughs, biscuits, quick breads, cookies, cakes, custards and yeast doughs. Decorative work is also covered. This course is required for the American Culinary Federation Educational Institute (ACFEI) Certificate.

Culinary Arts 10B
Baking Techniques II
2 units; 1 hour lecture, 3 hours lab
Prerequisite: Culinary Arts 10A with a minimum grade of C
Enrollment Limitation: valid negative Tuberculosis (TB) test
Credit, degree applicable
This is an advanced course in baking. Students will prepare puff pastry, foam cakes, classic European tortes, pastry fillings, meringues, chocolate, decorative work and display pieces.

Culinary Arts 15A
Catering and Garde Manger
2 units; 1 hour lecture, 2 hours lab (plus 18 hours to be arranged)
Prerequisite: Culinary Arts 5A with a minimum grade of C
Enrollment Limitation: valid negative Tuberculosis (TB) test
Credit, degree applicable
This course covers the planning, preparation, presentation and evaluation of catered social events along with the modern trends of garde manger and the art of decorating food for eye appeal. Students will prepare specialty canapes, hors d'oeuvres, vegetable carvings, food decorations and beverages. The requirements of federal, state and local regulations will be assessed.

Culinary Arts 15B
Catering Management
2 units; 1 hour lecture, 2 hours lab (plus 18 hours to be arranged)
Prerequisite: Culinary Arts 15A with a minimum grade of C or comparable industry experience
Enrollment Limitation: valid negative Tuberculosis (TB) test
Credit, degree applicable
This course covers planning, preparation, presentation, and evaluation of catered social events. Successful management techniques will be practiced: bid writing, menu pricing, production control, sales promotion and marketing, insurance and computer assisted costing. The student will acquire additional food preparation experience and develop an operations manual.

Culinary Arts 25
Management by Menu
3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 84
Enrollment Limitation: valid negative Tuberculosis (TB) test
Credit, degree applicable
This course covers menu planning, purchasing, writing specifications for food and supplies, receiving and storage techniques. Topics include: planning interesting and satisfying meals for restaurants and institutions, with emphasis on type of operation, nutritional adequacy, menu pricing, budget, equipment and skill of personnel. This course is required for the American Culinary Federation Educational Institute (ACFEI) Certificate.

Culinary Arts 30
Supervision in the Food Service Industry
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
This course covers the principles of supervision in the food service industry: selection, placement orientation, training, counseling, evaluation, promotion and transfer of food service employees. It is required for an American Culinary Federation Educational Institute (ACFEI) Certificate.

Culinary Arts 35
Food Service Facilities and Equipment
1 unit; 1 hour lecture
Recommended Preparation: concurrent enrollment in Culinary Arts 3; eligibility for English 84
Credit, degree applicable
This course covers the basic principles of equipment selection, facility layout and cleaning procedures for efficient quantity food preparation. It is required for an American Culinary Federation Educational Institute (ACFEI) Certificate.

Culinary Arts 110abc
Specialty Beverage Technician Training I
3 units; 2 hours lecture, 4 hours lab
Recommended Preparation: qualifying score on a general mechanical aptitude test
Credit, not degree applicable
This is an introductory course designed to prepare students for entry-level employment in the specialty coffee beverage industry. Topics include: safety, electricity/electronics, plumbing, sanitation, mechanics and customer service. Students successfully completing this course will be eligible for Specialty Beverage Technician Level 1 certification.

Dance

Dance 1
Dance Appreciation
3 units; 3 hour lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of styles, artists, and cultural/historical context for dance as an art form and social expression. Topics of emphasis may be varied from semester to semester to reflect visiting artists, current events and popular culture. In addition to class time, students will be required to attend selected dance events.

Dance 3
History of Dance in the 20th Century
3 units; 3 hours lecture
Recommended Preparation: Dance 19ab or the equivalent and eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course presents dance history of the 20th century. The course will focus on trends in ballet and modern dance forms as they relate to 20th century aesthetic viewpoints. Attendance at selected dance events at El Camino College sponsored by the Center for the Arts is required.

Dance 5
Music for Dance
2 units; 1 hour lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course introduces the student to the relationships between music and dance through an introduction to music elements, history and form. Special emphasis on rhythmic analysis for dance accompaniment. Attendance at selected dance events at El Camino College sponsored by the Center for the Arts is required.

Dance 9ab
Flamenco Dance
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course introduces Flamenco dance through the practice of steps and choreography as well as the study of music, costumes, and cultures from selected countries. Emphasis is placed on basic Flamenco dance footwork as well as necessary skills for stylistic expression.

Dance 10
Social and Ballroom Dance
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course includes instruction and practice of social and ballroom dances. Basic skills on leading and following, carriage and alignment of the body, animation, and etiquette are emphasized. Attendance at selected dance events at El Camino College sponsored by the El Camino College Center for the Arts is required.

The hours per week of courses may be adjusted based on the length of the term.

Dance – A.A. Degree

(Fine Arts Division)

The degree provides students with a comprehensive foundation in the theory, history, technique, and art of dance. This is fulfilled through a structured program of dance study in the areas of core techniques, historical and contemporary styles, choreography, performance, and dance history. Students will demonstrate their proficiency through technical, interpretive, and expressive competency, research papers, essays, and public performances. Program assessment is measured by public performances, program completion, transferability, and periodic program review. Students qualify to pursue a variety of dance-related careers and advanced degree options.

El Camino College Major Requirements
Theory: Dance 3, 5, 70abcd, 71ab
Technique: Dance 32ab, 42ab; 8 units from: Dance 22ab*, 23abcd*, 25abcd, 26abcd, 33abcd, 35abcd, 43abcd, 72abcd; 4 units from: Dance 83abcd, (can be taken a maximum of 3 semesters for major credit), 87abcd**, 89abcd; 3 units from Dance 9ab, 10, 12abcd, 14ab, 16ab, 17abcd, 18ab, 21abcd, 51ab, 52abcd, 53ab, 54abcd, 61ab, 62abcd
Total Units: 28

It is essential that the transfer student see a counselor for appropriate curriculum.
*Some colleges and universities may not accept jazz courses toward the major.
**Students are advised that at least one semester of Dance 87abcd is required for transfer students.

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Dance 12abcd
World Dance
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course provides an overview of several specific cultural dance styles which may include African, Afro-Cuban, Mexican, Tap, Middle Eastern, or Asian dance. The study of music, art, costumes, and regional customs of the particular style is also included.

Dance 14ab
Mexican Dance
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course introduces the dances of Mexico through practice of steps and choreography as well as the study of music, costume and culture from selected regions and historical periods. Emphasis is placed on basic Mexican folk dance footwork as well as necessary motor skills for stylistic expression. Attendance at selected dance events sponsored by the Center for the Arts at El Camino College is required.
Note: Letter grade or P/NP option.

Dance 16ab
African Dance
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course introduces selected dances of Africa through the practice of steps and choreography. Also covered will be the music and artifacts of the dances studied and their social or religious significance in African cultures. Emphasis is placed on coordination of polyrhythmic body movements with the music. Attendance is required at selected dance events sponsored by the Center for the Arts at El Camino College.
Note: Letter grade or P/NP option.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Dance 17abcd
Intermediate African Dance
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Dance 16ab with a minimum grade of C
Recommended Preparation: Dance 22ab or Dance 42ab
Credit, degree applicable
Transfer CSU, UC
As a continuation of Dance 16ab, this course will introduce new movement patterns focusing on technical skills and traditional dances that are found in African dance. The class will also explore Dunham Technique as a means for providing a basic foundation in African dance, focusing on torso movements, isolations, and feet movements.
Note: Letter grade or P/NP option.

Dance19ab
Beginning Dance
2 units; 1 hour lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to basic dance techniques and terminology for the beginning student. This course includes segments on body alignment, flexibility, strength, coordination and combinations common to ballet, jazz and modern dance. Attendance is required at selected dance events that are sponsored by the Center for the Arts.
Note: Letter grade or P/NP option.

Dance 20abcd
Body Conditioning for Dance Techniques
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course covers principles of ballet-based technique through exercise systems specific to dance training. Class activities emphasize alignment, placement, strength, injury prevention, and efficient joint articulation. Muscle and skeletal terminology as well as basic ballet terminology are introduced. This class is appropriate for dancers at all levels, including those beginning dance training and those returning after an injury or period of inactivity.

Dance 21abcd
Pilates Mat Class
2 units; 1 hour lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course covers the concepts and exercises developed by Joseph H. Pilates. Emphasis is placed on mat work that features exercises for improving body alignment, strength, flexibility, muscle control, coordination, and breathing. Exercises are designed to enhance dance technique and performance as well as to help the dancer prevent injuries.
Note: Letter grade or P/NP option.

Dance 22ab
Jazz Dance I
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: one semester of Dance 19ab or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is the first in a sequence of two levels of jazz dance. This course includes work on centering, turns, timing, flexibility, and strength training. Attendance is required at selected dance events that are sponsored by the Center for the Arts.
Note: Letter grade or P/NP option.

Dance 23abcd
Jazz Dance II
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Dance 22ab with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is a continuation of Dance 22ab with increased emphasis on ease of performance, projection, speed of learning and development of individual style. This course will concentrate on dance terminology and techniques required for success in professional auditions. This course is highly recommended for those seeking a career in dance performance or related theatrical fields. Attendance is required at selected dance events at El Camino College sponsored by the Center for the Arts.
Note: Letter grade or P/NP option.

The hours per week of courses may be adjusted based on the length of the term.

Dance 25abcd
Commercial Dance
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Dance 23abcd with a minimum grade of C
Recommended Preparation: Dance 32ab
Credit, degree applicable
Transfer CSU, UC
This course is designed for those attending commercial auditions on a regular basis and emphasizes movement for commercial dance work used in motion pictures, concert dance, television, industrial shows, and other commercial applications. It offers instruction in current trends of popular dance, jazz styling, and commercial audition preparation. Attendance is required at selected dance events offered by the El Camino College Center for the Arts.
Note: Letter grade or P/NP option.

Dance 26abcd
Hip Hop Dance
2 units; 1 hour lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
In this course students are introduced to various forms of Hip Hop dance. The history, vocabulary, social, and theatrical codifications of Hip Hop dance are also explored.
Note: Letter grade or P/NP option.

Dance 32ab
Ballet I
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: Dance 19ab or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is the first in a sequence of two levels of ballet. This course will reinforce basic barre and center work ballet skills and is required of all dance majors. Attendance is required at dance events sponsored by the Center for the Arts.
Note: Letter grade or P/NP option.

Dance 33abcd
Ballet II
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Dance 32ab with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is the second of two levels of ballet offered and is applicable to the dance major. Barre and center work will expand upon skills learned in Dance 32ab. Emphasis will be on complexity in allegro and adagio combinations. Students will perform variations from the classical repertoire. Attendance is required at dance events sponsored by the Center for the Arts.
Note: Letter grade or P/NP option.

Dance 35abcd
Ballet Variations
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Dance 32ab with a minimum grade of C
Recommended Preparation: Dance 33abcd
Credit, degree applicable
Transfer CSU, UC
This course continues the development of technical skills for ballet dance and emphasizes artistic expression through exposure to classical and contemporary ballet variations including partnering and dancing en pointe. Attendance at selected events offered by the El Camino College Center for the Arts is required.
Note: Letter grade or P/NP option.

Dance 42ab
Modern Dance I
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: Dance 19ab or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is the first in a sequence of two levels of modern dance. It focuses on the development of dance skills through modern dance movement, emphasizing combinations on the floor and standing or traveling through space. Creative expression is included through exploration of dance skills. Attendance is required at dance events sponsored by the Center for the Arts.
Note: Letter grade or P/NP option.

Dance 43abcd
Modern Dance II
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Dance 42ab with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is the second in a sequence of two levels of modern dance. This course further develops the student's ability to use the body as an instrument of expression, with emphasis on performance skills, technique related to specific modern dance styles, and dance as a concert art form. Attendance at selected dance events at El Camino College sponsored by the Center for the Arts is required.
Note: Letter grade or P/NP option.

Dance 50
Special Topics in Dance
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Dance more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Dance 51ab
Latin Social Dance
2 units; 1 hour lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course is an overview of Latin social dances including salsa, cha cha, tango, rumba, samba, mambo, and selected folk and regional dances. Areas of study include movement theory, dance vocabulary, dance courtesy, fundamentals of music as they relate to dance, and dance history. Students will be exposed to vintage dance forms as well as current trends. Attendance at selected dance events offered by the El Camino College Center for the Arts is required.
Note: Letter grade or P/NP option.

Dance 52abcd
Intermediate Latin Social Dance
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Dance 51ab with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course builds on the basic vocabulary and steps of the Latin social dances including salsa, cha cha, tango, rhumba, samba, mambo, and selected folk and regional dances. Areas of study include movement theory, dance vocabulary, dance courtesy, and musical rhythms as they relate to dance and dance history. Students will be exposed to vintage dance forms as well as current trends. Attendance is required at selected events presented by the El Camino College Center for the Arts.
Note: Letter grade or P/NP option.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Dance 53ab
American Social Dance
2 units; 1 hour lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course is an overview of American social dance in the 20th century including West coast swing, East coast swing, Lindy hop and country line dance. Areas of study include movement theory, dance vocabulary, dance courtesy, fundamentals of music as they relate to dance, and dance history. Students will be exposed to vintage dance forms as well as current trends. Attendance at selected dance events offered by the El Camino College Center for the Arts is required.
Note: Letter grade or P/NP option.

Dance 54abcd
Intermediate American Social Dance
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Dance 53ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course builds on the basics of American social dance in the 20th century including West Coast swing, East Coast swing, Lindy hop, and country line dance. Areas of study include movement theory, dance vocabulary, dance courtesy, and musical rhythms as they relate to dance and dance history. Students will be exposed to vintage dance forms as well as current trends. Attendance is required at selected events presented by the El Camino College Center for the Arts.
Note: Letter grade or P/NP option.

Dance 61ab
Tap Dance I - Beginning
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course introduces elementary techniques of tap dancing, including music theory concepts as they apply to the rhythms of tap dance. Attendance is required at selected dance events at El Camino College Center for the Arts.

Dance 62abcd
Tap Dance II - Intermediate
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Dance 61ab with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU,UC
This course is a continuation of Dance 61ab. Students will refine the basic tap dance skills and learn more complex tap combinations that incorporate a variety of rhythms and styles. Attendance at selected dance events at El Camino College Center for the Arts is required.

Dance 70abcd
Improvisation
2 units; 1 hour lecture, 3 hours lab
Credit, degree applicable
Transfer CSU
This course is designed for students with all levels of dance experience. The emphasis of the class is to encourage creative development rather than technical dance skills. It is highly recommended for non-dancers and beginning choreographers. Content areas include improvisational problems organized into three main areas: space, time, and movement invention. Topics progress from individual exploration to formally structured group improvisation. Attendance at selected dance events is required.
Note: Letter grade or P/NP option.

Dance 71ab
Choreography I
2 units; 1 hour lecture, 3 hours lab
Prerequisite: Dance 19ab and Dance 70abcd with a minimum grade of C. Dance 70abcd may be taken concurrently with Dance 71ab
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to fundamental skills and concepts of choreography with an emphasis on utilizing movement resources for creating dances. Attendance at selected dance events is required.

Dance 72abcd
Choreography II
2 units; 1 hour lecture, 3 hours lab
Prerequisite: Dance 71ab with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course helps students to develop choreographic concepts and skills from Dance 71ab. Methods of expanding initial movement concept from a solo or small group to large group composition are also studied. Attendance at selected dance events at El Camino College sponsored by the Center for the Arts is required.

Dance 83abcd
Dance Workshop Ensemble
1 unit; 4 hours lab
Corequisite: enrollment in any of the following technique classes: Dance 14ab, 16ab, 17abcd, 18abcd, 19ab, 22ab, 23abcd, 25abcd, 32ab, 33abcd, 35abcd, 42ab, 43abcd, 51ab, 52abcd, 53ab, 54abcd, 61ab, 62abcd
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to dance performance of works in progress. Students will participate in one or more formal or informal performances as dancers, choreographers, or crew.

Dance 87abcd
Concert Dance Ensemble
1 unit; 4 hours lab
Enrollment Limitation: audition
Credit, degree applicable
Transfer CSU, UC
This course offers the opportunity to participate in a major concert dance production in a capacity to be determined by the capabilities of the individual and the demands of the choreography. This is an intensive 9-week course with extended rehearsal times to be arranged. Attendance at selected dance events at El Camino College sponsored by the South Bay Center for the Arts is required.

Dance 89abcd
Advanced Dance Theatre
1 unit; 4 hours lab
Enrollment Limitation: audition
Credit, degree applicable
Transfer CSU, UC
In this class students organize production elements and rehearse as performing members of a dance company. Dance performance techniques and artistic skills are emphasized. Choreography is by faculty, guest artists, or advanced level dance students. Emphasis is also given to preparation for pre-professional auditions.

Dance 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Dance with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides special advanced studies in a subject field of Dance not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Dance projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Drafting Technology
See Computer Aided Design/Drafting

Economics – A.A. Degree
(Behavioral and Social Sciences Division)

The degree in economics is designed to provide students with a foundation in macroeconomics and microeconomics theory. Economics majors will acquire knowledge of the principle economic models for understanding how the national economy functions, the fundamental laws of supply and demand, and international trade theory. Students will be able to apply methodologies to assess fiscal and monetary policy, price levels, and the allocation of goods and resources in competitive and monopolistic markets. Competencies will be assessed through regularly scheduled objective and essay examinations and problem solving assignments.

El Camino College Major Requirements
Economics 1, 2, English 1A, Mathematics 160 and 161 or 190 and 191; choose two courses from the following: History 1A, 1B, 140, 141, Political Science 1
Total Units: 23-25

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Economics

Economics 5
Fundamentals of Economics
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**
In this course students are introduced to the study of how a market economy solves the problem that the scarcity of resources and goods imposes on a society. Supply and demand concepts, the effects of controls on the economy, unemployment and inflation, and the principles of international trade and finance are also discussed.
•Note: Students will not receive UC credit for Economics 5 if taken after Economics 1 or 2.

Economics 1
Principles of Economics: Macroeconomics
3 units; 3 hours lecture
Recommended Preparation: Economics 5 with a minimum grade of C; Mathematics 70; eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
Macroeconomics introduces students to the principles that explain the operation of the national economy. Topics to be analyzed include consumption of products, exchange, aggregate output, the money supply, national income, price level, economic growth, internation trade, international finance, and macroeconomic policies.

Economics 2
Principles of Economics: Microeconomics Theory
3 units; 3 hours lecture
Prerequisite: Economics 1 with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
Microeconomics theory develops the principles that govern the operation of the market economy. This course emphasizes the development of the fundamental laws of supply and demand - in particular, how laws of supply and demand determine the allocation of goods and resources in both competitive and monopolistic markets.

Economics 50
Special Topics in Economics
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Economics more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

The hours per week of courses may be adjusted based on the length of the term.

Economics 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: Economics 1 and 2 with a minimum grade of B in each and acknowledgement by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides advanced studies in a subject field of Economics not covered in the regular departmental offerings. Regular conferences will be held with the instructor to discuss and coordinate assigned projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Education

Education 101
Introduction to the Field of Education
1 unit; 1 hour lecture
Credit, degree applicable
Transfer CSU, UC
This course is designed to help students explore a variety of careers in education and to prepare them for future studies in the field. Course topics include the qualities of effective teachers and other school professionals as well as the challenges and rewards of various careers in education. Types of credentials and credential programs, subject area coursework, state examinations, educational and technological resources, state standards, and professional portfolios will be discussed. Throughout the course, students will also conduct off-site observation.

Education 201
Foundations in Education
3 units; 3 hours lecture
Prerequisite: Education 101 with a minimum grade of C; eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course introduces students to the concepts and issues related to teaching children with diverse backgrounds in preschool through grade twelve. Course topics include teaching as a profession and career, contemporary educational issues, California's content and performance standards, and credential requirements. Throughout the course, students will contribute materials to their portfolios and will also conduct a minimum of 30 hours of pre-approved, structured fieldwork in diverse classroom settings.

Educational Development

Educational Development 8ab
Basic Mathematics Preparation for Deaf and Hard of Hearing Students
3 units; 2 hours lecture, 3 hours lab
Credit, not degree applicable
This is a self-paced developmental course designed for deaf and hard of hearing students wishing to study basic mathematical skills. Topics covered include: whole number concepts, fractions and decimals. Emphasis is upon computational skills.

Educational Development 9ab
Advanced Mathematics Preparation for Deaf and Hard of Hearing Students
3 units; 2 hours lecture, 3 hours lab
Prerequisite: one semester of Educational Development 8ab with a minimum grade of C or equivalent
Credit, not degree applicable
This is a self-paced developmental course designed for deaf and hard of hearing students wishing to study advanced mathematical skills. Topics covered include: ratios, proportions, percents, measurements, geometry, statistics and algebra. Major emphasis is on solving verbal problems.

Educational Development 10abcd
English Grammar for Deaf and Hard of Hearing Students
3 units; 3 hours lecture, 1 hour lab
Recommended Preparation: that the student be eligible (and verified) for services through the Special Resource Center
Credit, not degree applicable
This is a developmental course designed to transfer the student's first language into written English by focusing on English grammar, pre-writing skills and vocabulary. Students will combine structurally accurate sentences into a comprehensive paragraph.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Educational Development 11abcd
Writing and Reading for Deaf and Hard of Hearing Students
3 units; 2 hours lecture, 2 hours lab
Recommended Preparation: that the student be eligible (and verified) for services through the Special Resource Center
Credit, not degree applicable
This is a comprehensive writing and reading course incorporating the use of the writing process, development of writing skills, building basic reading skills and vocabulary development. Students will write in response to selected short stories, personal experiences, and stories presented in the students' first language. Emphasis will be placed on the development of efficient reading skills that include pre-reading strategies, making inferences, using contextual clues and identifying the main idea.

Educational Development 14
American Sign Language for Deaf and Hard of Hearing Students
3 units; 2 hours lecture, 3 hours lab
Credit, not degree applicable
This course will provide instruction for deaf and hard of hearing students in the development of sign vocabulary, finger spelling, receptive and expressive skills, and appropriate use of American Sign Language.
Note: It is recommended that students have verified eligibility for services offered through the Special Resource Center.

Educational Development 21
Career Preparation
2 units; 2 hours lecture, 2 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course assists the student in selecting a career and developing effective job seeking skills. The student will complete an interest inventory, review academic performance, research various careers and practice the steps necessary to attain employment.

Educational Development 22
Personal Assessment
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course helps students develop a better understanding of personal motivation as they establish short-and long-term goals. Students will also explore their personal value systems, the concepts of stress management, defense mechanisms, interpersonal communications, and time management.
Note: This course is appropriate for students with disabilities.

Educational Development 29
Individualized Assessment of Learning
0.5 unit; 9 hours lecture to be arranged per semester
Credit, not degree applicable
This course is designed for the student with special learning needs who may have a specific learning disability. Individual assessment of learning strengths and weaknesses will be completed to determine eligibility for services and to assist with early intervention in basic skills, learning strategies, study skills and educational planning.
Note: Pass/no pass only.

Educational Development 31abcd
Increased Learning Performance
1 unit; 3 hours lab
Credit, not degree applicable
In this laboratory course, students will increase learning performance and study skills that relate to content of other El Camino College courses. Students will also enhance critical thinking skills and evaluate assistive technologies that improve academic success. In addition, specific sections of the course will be offered for English and mathematics skills.
Note: This course is appropriate for students with disabilities.
Note: Pass/no pass only.

Educational Development 32ab
Psychology of Affective Learning
3 units; 3 hours lecture
Credit, not degree applicable
This course is designed to expose students to effective principles and exercises that enhance the students's self concept as a learner. The benefits of a positive attitude and learning performance will also be covered.
Note: This course is appropriate for students with disabilities.
Note: Pass/no pass only.

Educational Development 33ab
Specific Learning Strategies
3 units; 3 hours lecture
Credit, not degree applicable
In this course students will explore specific techniques, principles, and strategies which enable them to effectively acquire, integrate, store, and retrieve information.
Note: This course is appropriate for students with disabilities.
Note: Pass/no pass only.

Educational Development 35ab
Reading Skills for Students with Learning Differences
3 units; 3 hours lecture, 1 hour lab
Credit, not degree applicable
This course, designed for students who have a processing deficit in reading, will emphasize a variety of learning strategies and electronic technologies. Learners will increase their reading vocabulary, level of reading comprehension, and fluency in processing the printed word. Students will gain greater awareness of their learning preferences and how to apply them to increase their reading and learning levels. Students will construct a learning system which will facilitate their ability to read, to understand, and to critically evaluate reading material.
Note: Pass/no pass only.

Educational Development 36ab
Writing Skills for Students with Learning Differences
3 units; 2 hours lecture, 2 hours lab
Credit, not degree applicable
This course is designed for students with learning differences who need to improve basic writing skills. A process approach to writing is integrated with reading assignments to provide a variety of writing experiences. Students practice learning strategies related to writing and receive individualized instruction to increase writing skills and prepare them for regular English classes.
Note: Pass/no pass only.

Educational Development 40
Assisted Computer Literacy
2 units; 1.5 hours lecture, 1.5 hours lab to be arranged
Recommended Preparation: minimum typing speed of 5 words per minute
Credit, degree applicable
Transfer CSU
This introductory computer course is designed to instruct students with disabilities in the use of assistive computer technology appropriate to the individual's functional limitations. The student will acquire basic computer literacy skills with an emphasis on word processing in the Windows environment.
Note: Letter grade or P/NP option.

Educational Development 41abcd
Assisted Computer Technology Laboratory
1 unit; 3 hours lab to be arranged
Recommended Preparation: basic computer literacy skills
Credit, not degree applicable
This computer laboratory course is designed to enhance computer skills of students with disabilities. Students will select disability-specific programs and/or assistive technology suited to their particular needs. They will improve their skills and competencies in personal computer usage.
Note: Pass/no pass only.

Educational Development 50
Special Topics in Educational Development
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Educational Development more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Electronics and Computer Hardware Technology

Electronics and Computer Hardware Technology 11
Introduction to Electronics
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU
This course is an introduction to electronics for students preparing to enter the field and for students interested in consumer electronics; it provides the basis for further studies in electronics and computer hardware technology. Topics include safety, employment opportunities, the basic theory and applications of electricity, analysis of circuit values using a standard scientific calculator, component identification and schematic diagrams, and the techniques of electrical measurement. Also introduced are alternating current measurements and the use of the oscilloscope. Common devices employed in automotive and air conditioning systems are also covered.

Electronics and Computer Hardware Technology – A.S. Degree and Certificates of Achievement and Accomplishment

(Industry and Technology Division)

The electronics and computer hardware technology program prepares students for employment in the areas of computer hardware and industrial, military, and consumer electronics. Students acquire proficiency in analyzing, assembling, testing, and troubleshooting both analog circuits and computer systems. Students are trained in industry standard codes and symbols for components, systems, safety devices, and procedures. The program also meets the needs of the currently employed who seek to upgrade skills, change careers, or prepare for industry certification and licensing. Competencies will be assessed regularly by student performance in the classroom and laboratory.

El Camino College Major Requirements

At least 50% of the major requirements for the Associate of Science degree must be completed at El Camino College.

Computer Technology Option: Electronics and Computer Hardware Technology 11, 22, 110, 130, 131, 140, 142, 144; two courses from: Electronics and Computer Hardware Technology 95abcd (one semester), 191, 194, Computer Systems 13, 40
Total Units: 32-34

Electronics Technology Option: Electronics and Computer Hardware Technology 11, 22, 110, 112, 120, 122, 124, 130, 131, 140, 190; one course from: Electronics and Computer Hardware Technology 95abcd (one semester), 142, 144, 150, 152, 191, 192, 193, 194
Total Units: 37-39

Certificates of Achievement

A Certificate of Achievement will be granted upon completion of the courses in one of the following options: Communications Equipment Technician, Computer Hardware Electronics Technician, Electronics Engineering Technician, or Industrial Computer Control Technician. At least 50% of the courses for the Certificate of Achievement must be completed at El Camino College.

Communications Equipment Technician Option: Electronics and Computer Hardware Technology 11, 22, 110, 120, 124, 150, 152, 193; one course from: Electronics and Computer Hardware Technology 95abcd (one semester), 140, 190, 191, 194, Computer Information Systems 13
Total Units: 27-29

Computer Hardware Electronics Technician Option: Electronics and Computer Hardware Technology 11, 22, 110, 130, 140, 142, 144; two courses from: Electronics and Computer Hardware Technology 95abcd (one semester), 131, 191, 194, Computer Information Systems 13, 40
Total Units: 29-31

Electronics Engineering Technician Option: Electronics and Computer Hardware Technology 11, 22, 110, 120, 124, 130, 140, 190; two course from: Electronics and Computer Hardware Technology 95abcd (one semester), 142, 144, 150, 152, 190, 191, 192, 193, 194
Total Units: 30-34

Industrial Computer Control Technician Option: Electronics and Computer Hardware Technology 11, 22, 110, 120, 124, 130, 140, 191, 192, Machine Tool Technology 10A; one course from: Electronics and Computer Hardware Technology 95abcd (one semester), 131, 142, 190
Total Units: 34-36

(continued on next page)

Electronics and Computer Hardware Technology 20

Basic Mathematics for Electronics

2 units; 2 hours lecture
Credit, degree applicable
Transfer CSU

This course is an introduction to mathematics for electronics and is designed to prepare students for entry level employment in the field. Topics include the metric system, introduction to algebra, uses of the scientific calculator, simple equations, graphing, logarithms and decimals.

Electronics and Computer Hardware Technology 22

Basic Electronic Fabrication

3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU

This course focuses on the materials and the processes used for fabricating electronic systems. The process includes designing, assembling, testing, and documenting a basic electronic fabrication project. Topics covered will include safety, component identification, schematic diagrams, assembly pictorials, soldering (both printed wire boards and terminals), inspection, sheet metal fabrication, hand-tool use, cabling, wire wrapping, printed circuit board construction and repair, Continuous Improvement Techniques, and ESD (Electrostatic Discharge) awareness. Mass production will be stressed for practical experience in all areas.

Electronics and Computer Hardware Technology 50

Special Topics in Electronics and Computer Hardware Technology

Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course

This course is designed to explore topics in Electronics and Computer Hardware Technology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Electronics and Computer Hardware Technology

(Continued from previous page)

Certificate of Accomplishment
A Certificate of Accomplishment will be granted upon the completion of the courses in one of the following options: Computer Hardware Technician, Electronics Technician, or Powerline Industry Readiness. At least 50% of the courses required for the Certificate of Accomplishment must be completed at El Camino College.
Computer Hardware Technician Option: Electronics and Computer Hardware Technology 130, 140, 142, 144
Total Units: 15
Electronics Technician Option: Electronics and Computer Hardware Technology 11, 22, 110, 120, 140
Total Units: 16
Powerline Industry Readiness Option: Construction Technology 172, Electronics and Computer Hardware Technology 62, 64, 68, 110
Total Units: 14

Electronics and Computer Hardware Technology 62
Introduction to the Electric Power Industry
2 units; 1.5 hours lecture, 1.5 hours lab
Credit, degree applicable
Transfer CSU
In this course, students are introduced to electric power generation and transmission. Topics will emphasize employment opportunities in the powerline industry. The course will include a general overview of the types of power systems, electricity generation, basic electrical theory, history of power generation and distribution, power system protection, system reliability, and power industry governance.
Note: Letter grade or P/NP option.

Electronics and Computer Hardware Technology 64
Electric Power Industry Safety
2 units; 2 hours lecture
Credit, degree applicable
Transfer CSU
This course addresses OSHA (Occupational Safety and Health Administration) regulations for the electric power generation and distribution industry. The topics covered include OSHA regulations for the utility industry, personal protective equipment, fall protection, hazardous material handling, fire protection, hand and power tools, and electrical distribution safety components. Students successfully completing the course will be eligible to take the examination for the OSHA (30 hours) safety-training certificate.
Note: Letter grade or P/NP option.

Electronics and Computer Hardware Technology 68
Electric Power Transmission and Distribution Systems
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU
This course provides an in-depth study of the electrical components used in the transmission of electricity from generation to the user. Students will study switchyards and substations as well as learn the operation of transformers, circuit breakers, regulators, capacitor banks, tap changers, disconnects, current and potential transformers, and lightning arrestors. The various types of electrical conductors, structures, and insulators used in the transmission of electricity will also be studied.
Note: Letter grade or P/NP option.

Electronics and Computer Hardware Technology 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Electronics and Computer Hardware Technology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Electronics and Computer Hardware Technology 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Electronics and Computer Hardware Technology with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Electronics and Computer Hardware Technology not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Electronics and Computer Hardware Technology projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Electronics and Computer Hardware Technology 110
Introduction to Direct and Alternating Current Circuits
3 units; 2 hours lecture, 4 hours lab
Prerequisite: Electronics and Computer Hardware Technology 11 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course teaches the foundational principles of direct and alternating current electricity through the correlation of theory with laboratory experiments. Basic circuit analysis forms the core of the course. The use of calculators, computers and oscilloscopes to make electrical measurements is included.

Electronics and Computer Hardware Technology 112
Advanced Direct and Alternating Current Circuits
3 units; 2 hours lecture, 4 hours lab
Prerequisite: Electronics and Computer Hardware Technology 110 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course teaches advanced principles of direct and alternating current electricity through the correlation of theory with laboratory experiments. Circuit analysis forms the core of the course. Included are the analysis of complex series-parallel resistor circuits, circuit analysis theorems, and the application of trigonometry to current, voltage, impedance, and power data. Other practical topics include the theory of electric meter operation and the analysis of series-parallel impedances.

Electronics and Computer Hardware Technology 120
Semiconductor Circuits I
3 units; 2 hours lecture, 4 hours lab
Prerequisite: Electronics and Computer Hardware Technology 110 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course provides the student with a background in modern solid-state devices sufficient for electronic technician work or troubleshooting. Emphasis is on the practical side of testing the devices, combined with study of their typical applications. The course of study includes the student construction of an AM radio and experience with computer simulation of laboratory experimentation.

Electronics and Computer Hardware Technology 122
Semiconductor Circuits II
3 units; 2 hours lecture, 4 hours lab
Prerequisite: Electronics and Computer Hardware Technology 120 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course is intended to give the student a more thorough background in solid-state devices such as transistors, FETs (Field Effect Transistors) and SCRs (Silicon Controlled Rectifiers). Practical laboratory experiences similar to those employed in the electronics industry are included. Laboratory experimentation results are predicted with computer simulation.

Electronics and Computer Hardware Technology 124
Operational Amplifiers and Linear Integrated Circuits
3 units; 2 hours lecture, 4 hours lab
Prerequisite: Electronics and Computer Hardware Technology 120 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course focuses on linear integrated circuit techniques, including operational amplifiers, comparators, phase locked loops, multiplexers and audio amplifiers. Laboratory activities include telecommunications, instrumentation, industrial electronics and practical measurement methods. In both lecture and laboratory exercises, students study circuits common to electronic systems, in addition to new, novel and useful circuit concepts.

Electronics and Computer Hardware Technology 130
Digital Systems and Computer Logic I
3 units; 2 hours lecture, 4 hours lab
Recommended Preparation: Electronics and Computer Hardware Technology 11
Credit, degree applicable
Transfer CSU
This is an introductory course in digital circuit theory and practice as it is used in contemporary computer, control, instrumentation and security systems. The course begins with the development of simple digital elements, which are combined in increasingly complex functions to perform higher-level logic functions. The laboratory exercises give the student the opportunity to verify the ideas presented in lecture, and explore the capabilities and limitations of commonly used logic circuits.

Electronics and Computer Hardware Technology 131
Digital Systems and Computer Logic II
3 units; 2 hours lecture, 4 hours lab
Prerequisite: Electronics and Computer Hardware Technology 130 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This is an intermediate-level course in digital theory and practice. The course begins with a study of currently available logic families and the methods of interfacing among them. Students will study and construct circuits utilizing Medium-scale Integration (MSI) and Large-scale Integration (LSI) logic devices, memory devices, programmable logic devices and microprocessors. Techniques of converting to and from the physical domain and the digital domain are addressed in detail, through the study of digital-to-analog (DAC) and analog-to-digital (ADC) conversion methods.

Electronics and Computer Hardware Technology 140
Computer Systems and Hardware Technologies I
4 units; 3 hours lecture, 4 hours lab
Recommended Preparation: Electronics and Computer Hardware Technology 11 or equivalent; Computer Information Systems 13 or equivalent
Credit, degree applicable
Transfer CSU
This course provides a general study of computer hardware systems and their underlying operating technologies. Topics covered include an overview of microprocessor-based computer systems, binary and hexadecimal numbering systems, computer system hardware components and peripherals, operating systems, basic hardware failures, and test and verification of proper computer systems operation. Students work in teams to develop analytical skills and techniques.
Note: Letter grade or P/NP option.

Electronics and Computer Hardware Technology 142
Computer Systems and Hardware Technologies II
4 units; 3 hours lecture, 4 hours lab
Prerequisite: Electronics and Computer Hardware Technology 140 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course provides a comprehensive study of advanced computer hardware systems and their associated technologies. Topics will include an in-depth analysis of microprocessor-based architectures and their related computer hardware system components and peripheral devices. Installation and configuration of the system hardware, advanced hardware and software integration skills, including conflict resolution, troubleshooting and optimization strategies will be taught.
Note: Letter grade or P/NP option.

Electronics and Computer Hardware Technology 144

A+ Certification Preparation for Computer Hardware Systems

4 units; 3 hours lecture, 4 hours lab
Prerequisite: Electronics and Computer Hardware Technology 140 with a minimum grade of C
Recommended Preparation: Computer Information Systems 40 or equivalent
Credit, degree applicable
Transfer CSU

This course is designed for the student pursuing a career as a computer service technician. Students will develop the skills and knowledge required for passing the CompTIA A+Certification: Core Hardware exam. Topics covered include safety, basics of electricity and electronics, microcomputer hardware and components, CMOS (Complementary Metal Oxide Semiconductor) settings, printers, portable systems and network hardware.

Note: Letter grade or P/NP option.

Electronics and Computer Hardware Technology 150

Electronic Communications I

4 units; 3 hours lecture, 3 hours lab
Prerequisite: Electronics and Computer Hardware Technology 120 with a minimum grade of C
Recommended Preparation: Electronics and Computer Hardware Technology 124
Credit, degree applicable
Transfer CSU

This course is a study in contemporary electronic radio communication technology, including AM (Amplitude Modulation) and FM (Frequency Modulation) communications. Also included is the study of radio frequency generation, modulation, transmission, and detection. A systems approach is used throughout the course.

Electronics and Computer Hardware Technology 152

Electronic Communications II

2 units; 2 hours lecture
Prerequisite: Electronics and Computer Hardware Technology 150 with a minimum grade of C
Credit, degree applicable
Transfer CSU

This course is a study in contemporary electronic radio communication technology, including TV, Microwave, Global Positioning Systems (GPS), and Digital communications. Also included is the study of radio frequency generation, modulation, transmission, and detection. A systems approach is used throughout the course.

Electronics and Computer Hardware Technology 190

Analog and Digital Systems Analysis and Troubleshooting

4 units; 3 hours lecture, 3 hours lab
Prerequisite: Electronics and Computer Hardware Technology 120 with a minimum grade of C
Credit, degree applicable

This course teaches the student to view electronic instruments and systems as an assembly of "building block'' circuits. Students learn the use of block diagrams as a powerful method of system fault localization. Laboratory activities rely heavily on troubleshooting of complete, commercially manufactured electronic systems and instruments. System analysis is performed at a level appropriate for rapid and effective troubleshooting and fault isolation to the component level.

Electronics and Computer Hardware Technology 191

Introduction to Microprocessors and Interfacing

3 units; 2 hours lecture, 4 hours lab
Prerequisite: Electronics and Computer Hardware Technology 120 with a minimum grade of C
Recommended Preparation: Electronics and Computer Hardware Technology 130 and 140
Credit, degree applicable
Transfer CSU

This course is an introduction to industrial microprocessors (micro-controllers) as they relate to industrial and consumer equipment. Included are the fundamentals of assembly language, use of software to simulate hardware, digital and analog interfacing, data storage, and trouble shooting.

Electronics and Computer Hardware Technology 192

Robotics and Machine Control

4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Electronics and Computer Hardware Technology 120 and 130 or equivalent
Credit, degree applicable
Transfer CSU

This course covers the study of the fundamentals of robotics and industrial machine control. Topics include programmable controllers (PLCs), hydraulic and pneumatic systems, open and closed loop servo systems, 3-axis coordinate systems and microprocessor control applications.

Electronics and Computer Hardware Technology 193

Preparation for the Federal Communication Commission (FCC) General Radio-Telephone Operator's License (GROL)

4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Electronics and Computer Hardware Technology 112 or employment in the electronic communications field
Credit, degree applicable

This course covers all the subject areas which form a basis for the current Federal Communication Commission (FCC) examination. Students will become proficient in the calculations which characterize the performance of receivers, transmitters, antenna systems and other equipment as currently used in electronic communications. Communications law, emergency communications and operating regulations are thoroughly covered. Career opportunities in electronic communications will be addressed.

Electronics and Computer Hardware Technology 194

Network and Telecommunications Cabling

3 units; 2 hours lecture, 4 hours lab
Recommended Preparation: Electronics and Computer Hardware Technology 11 and 140 or equivalent
Credit, degree applicable
Transfer CSU

This course introduces the student to the physical (hardware) layer of networks, cable TV wiring, thin-net, thick-net, UTP (Unshielded Twisted Pair), STP (Shielded Twisted Pair), 66 blocks, 110 blocks, single mode fiber optic cable, and multi-mode fiber optic cable. Students will work in teams to construct, test, troubleshoot and install various transmission media in telecommunications systems.

Elementary School Teaching

See Liberal Studies

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Engineering Technology – A.S. Degree and Certificates of Achievement

(pending approval by the California Community Colleges System Office)
(Industry and Technology Division)

The engineering technology program prepares students for transfer to university engineering technology programs and for employment in technical fields. by completing the degree or certificate requirements, students acquire a foundation in the principles of engineering, engineering design, digital electronics, automated manufacturing, and the application of math and science in technical fields. Careers in engineering technology involve high level technical work in the creation, production, utilization, and distribution of industrial materials, products, and processes. Competencies will be assessed regularly in accordance with skill standards established by the National Alliance for Pre-engineering Programs.

El Camino College Major Requirements
At least 50% of the requirements for the major must be completed at El Camino College.
Engineering Technician Option: (pending approval by the California Community Colleges System Office): Engineering Technology 10 or 10A and 10B, 12 or 12A and 12B, 14 or 14A and 14B, 16 or 16A and 16B, Machine Tool Technology 101abcd, Technical Mathematics 1; three courses from the following: Engineering Technology 18 or 18A and 18B, Machine Tool Technology 16ab*, Computer Aided Design/Drafting 26abcd*, 27abcd*, 28abcd*, Electronics and Computer Hardware Technology 22, Manufacturing Technology 70, 75 or 75A and 75B, Welding 15ab* (*one semester of)
Total Units: 25-28
Engineering Technology Option: (pending approval by the California Community Colleges System Office): Engineering Technology 10 or 10A and 10B, 12 or 12A and 12B, 14 or 14A and 14B, 16 or 16A and 16B, Chemistry 1A, Mathematics 190, Physics 2A; two courses from the following: Computer Information Systems 13, Electronics and Computer Hardware Technology 110, Engineering 1, 9, Engineering Technology 18 or 18A and 18B, Machine Tool Technology 101abcd, Manufacturing Technology 70, 75 or 75A and 75B
Total Units: 30-33

Certificates of Achievement
A Certificate of Achievement will be granted to students completing the requirements in either the Engineering Technician or Engineering Technology options. At least 50% of the courses for the Certificate of Achievement must be completed at El Camino College.
Engineering Technician Option: (pending approval by the California Community Colleges System Office): Engineering Technology 10 or 10A and 10B, 12 or 12A and 12B, 14 or 14A and 14B, 16 or 16A and 16B, Machine Tool Technology 101abcd, Technical Mathematics 1; three courses from the following: Engineering Technology 18 or 18A and 18B, Machine Tool Technology 16ab*, Computer Aided Design/Drafting 26abcd*, 27abcd*, 28abcd*, Electronics and Computer Hardware Technology 22, Manufacturing Technology 70, 75 or 75A and 75B, Welding 15ab* (*one semester of)
Total Units: 25-28
Engineering Technology Option: (pending approval by the California Community Colleges System Office): Engineering Technology 10 or 10A and 10B, 12 or 12A and 12B, 14 or 14A and 14B, 16 or 16A and 16B, Chemistry 1A, Mathematics 190, Physics 2A; two courses from the following: Computer Information Systems 13, Electronics and Computer Hardware Technology 110, Engineering 1, 9, Engineering Technology 18 or 18A and 18B, Machine Tool Technology 101abcd, Manufacturing Technology 70, 75 or 75A and 75B
Total Units: 30-33

Engineering

See Pre-Engineering for A.S. Degree Requirements

Engineering 1
Introduction to Engineering
2 units; 2 hours lecture
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to the engineering profession: preparation, training, practice, obligations and ethics. Also included is an orientation to the various disciplines of engineering. Speakers from various fields present opportunities and challenges in the engineering profession. Academic success strategies related to the study of engineering are emphasized throughout the course.

Engineering 9
Engineering Mechanics - Statics
3 units; 3 hours lecture
Prerequisite: Physics 1A with a minimum grade of C; Mathematics 220 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU, UC
The topics to be covered in the course are: resultants and components of concurrent forces, moments of forces with respect to points and axes, equivalent systems of forces and moments, equilibrium of particles and rigid bodies in two and three dimensions, distributed forces, centroids and centers of gravity, analysis of structures, forces in beams and cables, friction, moments and products of inertia, energy methods.

Engineering Technology

Engineering Technology 10
Principles of Engineering Technology
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU
In this course, students will explore technology systems and engineering processes to learn how math, science, and technology impact our society. The topics introduced include the design process, communication and documentation, engineering systems, statics, properties of materials, quality assurance, materials testing, and engineering for reliability.

Engineering Technology 10A
Principles of Engineering Technology I

1.5 units; 1 hour lecture, 2 hours lab
Credit, degree applicable;
Transfer CSU

This is the first of two courses in which students will explore technology systems and engineering processes to learn how math, science, and technology impact our society. The topics introduced include the design process, communication, documentation, and engineering systems.

Note: The two course sequence Engineering Technology 10A and Engineering Technology 10B is the same as Engineering Technology 10.

Engineering Technology 10B
Principles of Engineering Technology II

1.5 units; 1 hour lecture, 2 hours lab
Recommended Preparation: Engineering Technology 10A
Credit, degree applicable;
Transfer CSU

This is the second of two courses in which students will explore technology systems and engineering processes to learn how math, science, and technology impact our society. The topics introduced include statics, properties of materials, quality assurance, materials testing, and engineering for reliability.

Note: The two course sequence Engineering Technology 10A and Engineering Technology 10B is the same as Engineering Technology 10.

Engineering Technology 12
Introduction to Engineering Design

3 units; 2 hours lecture, 4 hours lab
Recommended Preparation: Engineering Technology 10
Credit, degree applicable
Transfer CSU

In this course, students will gain a basic understanding of the design process used in engineering fields and the application of computer modeling software. Emphasis is placed on the design process, geometric relationships, visualization, technical sketching, modeling, model documentation, assemblies, and production processes.

The hours per week of courses may be adjusted based on the length of the term.

Engineering Technology 12A
Introduction to Engineering Design I

1.5 units; 1 hour lecture, 2 hours lab
Credit, degree applicable;
Transfer CSU

This is the first of two courses in which students will gain a basic understanding of the design process used in engineering fields and the application of computer modeling software. Emphasis is placed on the design process, geometric relationships, visualization, and technical sketching.

Note: The two course sequence Engineering Technology 12A and Engineering Technology12B is the as Engineering Technology 12.

Engineering Technology 12B
Introduction to Engineering Design II

1.5 units; 1 hour lecture, 2 hours lab
Recommended Preparation: Engineering Technology 12A
Credit, degree applicable;
Transfer CSU

This is the second of two courses in which students will gain a basic understanding of the design process used in engineering fields and the application of computer modeling software. Emphasis is placed on, modeling, model documentation, assemblies, and production processes.

Note: The two course sequence Engineering Technology 12A and Engineering Technology 12B is the same as Engineering Technology 12.

Engineering Technology 14
Electronics for Engineering Technologists

3 units; 2 hours lecture, 4 hours lab
Recommended Preparation: Engineering Technology 10
Credit, degree applicable
Transfer CSU

In this course, students are introduced to the application of electronics in engineering technology. The topics studied include safety, Ohm's Law, engineering notation, DC circuits, capacitance, inductance, reactance, impedance, analog and digital waveforms, basic motors, number systems, logic gates, Boolean algebra, flip-flops, shift registers, and micro-processors. Techniques in computer simulation and electrical measurements will be stressed.

Engineering Technology 14A
Electronics for Engineering Technologists I

1.5 units; 1 hour lecture, 2 hours lab
Credit, degree applicable;
Transfer CSU

This is the first of two courses in which students are introduced to the application of electronics in engineering technology. The topics studied include safety, Ohm's Law, engineering notation, DC circuits, capacitance, inductance, reactance, and impedance. Techniques in computer simulation and electrical measurements will be stressed.

Note: The two course sequence Engineering Technology 14A and Engineering Technology 14B is the same as Engineering Technology 14.

Engineering Technology 14B
Electronics for Engineering Technologists II

1.5 units; 1 hour lecture, 2 hours lab
Recommended Preparation: Engineering Technology 14A
Credit, degree applicable;
Transfer CSU

This is the second of two courses in which students are introduced to the application of electronics in engineering technology. The topics studied include safety, analog and digital waveforms, basic motors, number systems, logic gates, Boolean algebra, flip-flops, shift registers, and micro-processors. Techniques in computer simulation and electrical measurements will be stressed.

Note: The two course sequence Engineering Technology 14A and Engineering Technology 14B is the same as Engineering Technology 14.

Engineering Technology 16
Computer Integrated Manufacturing

3 units; 2 hours lecture, 4 hours lab
Recommended Preparation: Engineering Technology 10 and 12
Credit, degree applicable
Transfer CSU

This course covers the integration of engineering technology principles and automation in manufacturing environments. Students will create three-dimensional designs with modeling software and produce actual components of their designs on computer numerically controlled (CNC) machine tools. Additional topics covered include machine tool operations, simulations, rapid prototyping (RP), robotics, and manufacturing systems.

Engineering Technology 16A
Computer Integrated Manufacturing I
1.5 units; 1 hour lecture, 2 hours lab
Recommended Preparation: Engineering Technology 10 or 10A and 10B, Engineering Technology 12 or 12A and 12B
Credit, degree applicable;
Transfer CSU
This is the first of two courses that cover the integration of engineering technology principles and automation in manufacturing environments. The topics covered include machine tool operations, simulations, and robotics.
Note: The two course sequence Engineering Technology 16A and Engineering Technology 16B is the same as Engineering Technology 16.

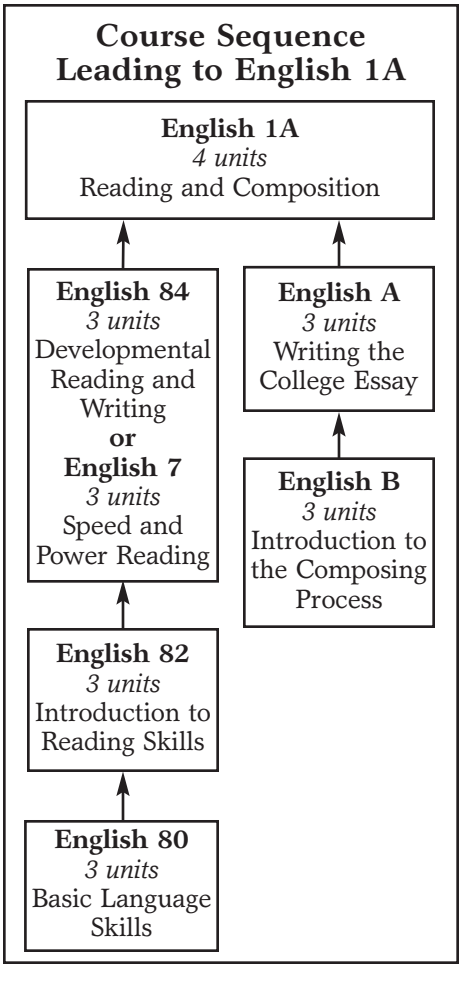
Engineering Technology 16B
Computer Integrated Manufacturing II
1.5 units; 1 hour lecture, 2 hours lab
Recommended Preparation: Engineering Technology 10 or 10A and 10B, Engineering Technology 12 or 12A and 12B, Engineering Technology 16A
Credit, degree applicable;
Transfer CSU
This is the second of two courses that cover the integration of engineering technology principles and automation in manufacturing environments. Students will create three-dimensional designs with modeling software and produce actual components of their designs on computer numerically controlled (CNC) machine tools. Additional topics covered include simulations, rapid prototyping (RP), and manufacturing systems.
Note: The two course sequence Engineering Technology 16A and Engineering Technology 16B is the same as Engineering Technology 16.

Engineering Technology 18
Engineering Design and Development
3 units; 2 hours lecture, 4 hours lab
Prerequisite: Engineering Technology 12, 14, and 16 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
In this capstone course, teams of students will work together to design and construct solutions to engineering problems. Emphasis will be placed on research methods, design problem statements, continuous improvement, cost analysis, prototyping, testing methods, project construction, and project presentation.

Engineering Technology 18A
Engineering Design and Development I
1.5 units; 1 hour lecture, 2 hours lab
Prerequisite: Engineering Technology 12 or 12A and 12B, Engineering Technology 14 or 14A and 14B, and Engineering Technology 16 or 16A and 16B with a minimum grade of C
Credit, degree applicable;
Transfer CSU
This is the first course in a two course sequence that covers engineering design and development concepts. In this capstone course, teams of students will work together to design and construct solutions to engineering problems. Emphasis will be placed on research methods, design problem statements, continuous improvement, cost analysis, and prototyping. Knowledge gained will be applied to a design solution of a problem assigned in the capstone project.
Note: The two course sequence Engineering Technology 18A and Engineering Technology 18B is the same as Engineering Technology 18

Engineering Technology 18B
Engineering Design and Development II
1.5 units; 1 hour lecture, 2 hours lab
Prerequisite: Engineering Technology 18A with a minimum grade of C
Credit, degree applicable;
Transfer CSU
This is the second course in a two-course sequence that covers engineering design and development. In this capstone course, teams of students will work together to design and construct solutions to engineering problems. Emphasis will be placed on testing methods, project construction, project presentation, and professional peer review.
Note: The two course sequence Engineering Technology 18A and Engineering Technology 18B is the same as Engineering Technology 18

English



English 80
(formerly RA)
Basic Language Skills
3 units; 3 hours lecture, 1 hour lab
Recommended Preparation: qualification by testing (English Placement Test) and assessment
Credit, not degree applicable
This course is designed to improve reading and study skills necessary for college success. Special emphasis will be placed on reading comprehension, strategies for understanding written words, study and test taking skills, and vocabulary expansion. As writing is a natural extension of the reading process, students also will learn the basic structure of sentences and will learn to recognize main ideas, relationships between main ideas and supporting detail, and patterns of organization in various types of reading material.
Note: Pass/no pass only.

English – A.A. Degree

(Humanities Division)

The degree program in English develops the student's ability to read both prose and poetry with understanding and discernment. The student will acquire competence in writing college-level expository essays and applying research strategies. The student will also develop interpretive and analytical skills through exposure to a wide range of literature. Competencies will be assessed primarily by evaluating the student's critical thinking abilities as demonstrated through written work. Completion of the program prepares the English major for any profession or industry requiring strong communication skills as well as transfer.

El Camino College Major Requirements
English 1A-1B, 15A-15B; 3 units from English 20, 21, 23, 35, 36, 40A, 40B; 6 units from the following literature or writing courses: Literature Courses - English 10, 11, 12, 18, 22, 26, 27, 28, 29, 30, 31, 34, 39, 42, 43, 44, 46; Writing Courses - English 1C, 24A, 24B, 25A, 32abc, 33, 38, 72
Total Units: 22

Preparation for the Transfer Major
For information on the specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

English 82
(formerly R)
Introduction to Reading Skills
3 units; 3 hours lecture, 1 hour lab
Prerequisite: credit in English 80 or qualification by testing (English Placement Test) and assessment
Credit, not degree applicable
This course is designed to improve general reading and thinking abilities through increasing the following skills: comprehension, vocabulary, reading speed, and study and test-taking techniques. Special emphasis will be placed on analysis of longer reading passages.
Note: Pass/no pass only.

English 84
(formerly 2R)
Developmental Reading and Writing
3 units; 3 hours lecture, 1 hour lab
Prerequisite: credit in English 82 or qualification by testing (English Placement Test) and assessment
Credit, degree applicable
This course is designed to prepare students to read college-level reading materials. Special emphasis will be placed on moving the students from a literal level of comprehension to a critical analysis of texts. Students will be able to integrate specific reading strategies rather than focus on individual skills, and will write responses to texts.
Note: Pass/no pass only.
Note: Students who receive credit for both English 84 and English A can count only one course for degree credit.

English C
Basic English Skills
3 units; 2 hours lecture, 2 hours lab
Recommended Preparation: qualification by testing (English Placement Test) and assessment
Credit, not degree applicable
This course introduces students to the basic principles of grammar and sentence structure. Students develop clear, concise sentences and write short paragraphs based on brief reading assignments, observations, and experience.
Note: Pass/no pass only.

English B
Introduction to the Composing Process
3 units; 2 hours lecture, 2 hours lab
Recommended Preparation: qualification by testing (English Placement Test) and assessment
Credit, not degree applicable
This course focuses on the brief expressive composition. Students write primarily narration and description based on observations of people, places, and things. In addition, they write reactions to brief reading selections. Some features of English B are focused journal writing, a learning tool that can be used in other courses; individualized instruction in sentence and word skills; assignments in critical thinking skills; and exercises in the elements of a composition.
Note: Pass/no pass only.

English A
Writing the College Essay
3 units; 2 hours lecture, 2 hours lab
Prerequisite: credit in English B or qualification by testing (English Placement Test) and assessment
Credit, degree applicable
This course will provide a complete introduction to essay writing based upon selected prose readings. A review of sentence skills and paragraph structure will be included.
Note: Pass/no pass only.
Note: Students who receive credit for both English A and English 84 can count only one course for degree credit.

English A-X
Writing the College Essay
3 units; 5 hours lecture
Prerequisite: ESL 53B with a minimum grade of C or qualification by assessment
Credit, degree applicable
This course will provide a complete introduction to essay writing based upon selected prose readings. A review of sentence skills and paragraph structure will be included.
Note: Pass/no pass only.

English 1A
Reading and Composition
4 units; 4 hours lecture
Prerequisite: credit in English A and credit in English 84 or English 7; or qualification by testing (English Placement Test) and assessment
Credit, degree applicable
*Transfer CSU, UC**
This course is designed to strengthen students' ability to read with understanding and discernment, to discuss the assigned readings intelligently, and to write clearly. Emphasis will be on writing essays in which each paragraph relates to a controlling idea, has an introduction and a conclusion, and contains primary and secondary support. College-level reading material will be assigned to provide the stimulus for class discussion and writing assignments, including a research paper.
Note: The maximum UC credit allowed for students completing English 1A, Reading and Composition, and English 1A, Reading and Composition for Foreign Students is one course.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

English 1A
Reading and Composition for Foreign Students
4 units; 5 hours lecture
Prerequisite: ESL 52B with a minimum grade of C and credit in English A-X or qualification by assessment
Credit, degree applicable
*Transfer CSU, UC**
This course is designed to strengthen students' ability to read with understanding and discernment, to discuss assigned readings intelligently, and to write clearly. Emphasis will be on writing essays in which each paragraph relates to a controlling idea, has an introduction and a conclusion, and contains primary and secondary support. College-level reading material will be assigned to provide the stimulus for class discussion and writing assignments, including a required research paper. This course is designed for students for whom English is their second language.
Note: The maximum UC credit allowed for students completing English 1A, Reading and Composition, and English 1A, Reading and Composition for Foreign Students is one course.

English 1B
Literature and Composition
3 units; 3 hours lecture
Prerequisite: English 1A with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
English 1B aims to stimulate an enjoyment of literature and to develop interpretive, critical, and analytical reading skills. Students will also receive extensive instruction on writing critically about short stories, novels, plays, poems, and biographies. The class will include research involving one or more literary genres.

English 1C
Critical Thinking and Composition
3 units; 3 hours lecture
Prerequisite: English 1A with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course focuses on the development of critical thinking skills and on the application of these skills to written argumentation. Students will examine logical reasoning and apply its principles when reading and writing analytic and evaluative essays about argumentative, persuasive, narrative and expressive works and topics.

The hours per week of courses may be adjusted based on the length of the term.

English 4
Grammar and Structure
3 units; 3 hours lecture, 1 hour lab
Recommended Preparation: eligibility for English A
Credit, degree applicable
This course is for students who want to become thoroughly familiar with English grammar, structure, and usage. An emphasis is placed on recognizing, writing, and combining sentences. In addition, traditional grammar, usage, and mechanics, as they pertain to writing with correctness, clarity, and effective style, are included.
Note: Letter grade or P/NP option.

English 7
Speed and Power Reading
3 units; 3 hours lecture, 1 hour lab
Prerequisite: eligibility for English 84 or ESL 52B
Credit, degree applicable
This course increases reading speed and flexibility while improving comprehension and critical thinking ability. Systematic processes for logically and efficiently analyzing text are emphasized. In addition, study skills, skimming and scanning techniques, and vocabulary development are included.
Note: Pass/no pass only.

English 10
Introduction to Poetry
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course provides an intensive study of poetry, examining individual poems and a variety of poetic types and techniques. Written analysis is stressed as students learn to organize and develop critical essays about poetry.

English 12
Introduction to Fiction
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on reading and interpreting the short story and the novel and analyzing the evolution, scope, and form of each genre. Students study the elements, themes, and styles of short stories and novels and the contributions of individual authors to each genre.

English 15A
Survey of British Literature
3 units; 3 hours lecture
Prerequisite: English 1A with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is a survey of British literature from the Anglo-Saxon period through the 18th century. Particular attention will be given to tracing the growth of English, Irish, Scottish and Welsh culture and identity in relation to the literature. The selections may include Beowulf, The Táin, and Everyman, as well as readings from Chaucer, Julian of Norwich, Kempe, Spenser, Lanyer, Shakespeare, Cary, Donne, Milton, Cavendish, Dryden, Behn, Pope, Swift, Johnson, and Sheridan.

English 15B
Survey of British Literature
3 units; 3 hours lecture
Prerequisite: English 1A with a minimum grade of C Note: English 15A is not a prerequisite to 15B
Credit, degree applicable
Transfer CSU, UC
This course is a survey of British literature by English, Irish, Scottish, and Welsh writers that begins with the Romantic Age and continues to the present. The course includes selections from major Romantic, Victorian, Modern and Postmodern authors, which may include Equiano, Burns, Blake, the Wordsworths, Coleridge, Byron, the Shelleys, Keats, Tennyson, the Brownings, the Brontës, Arnold, Hardy, Yeats, Conrad, Joyce, Eliot, Woolf, Lawrence, Beckett, Heaney, Pinter, and others.

English 18
Survey of Women Writers: Middle Ages to the Present
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
The course examines the literary contributions of women writers from the Middle Ages to the present. Students will study works of women's literature in traditional and nontraditional genres, as well as examine the aesthetic, political, historical, cultural, and social contexts of the lives and works of women writers.

English 20
Shakespeare's Plays - Tragedies and Romances
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course introduces students to Shakespeare's tragedies and romances. The major goals of the course are to help students understand the works, analyze the language, and read and evaluate critical Analysis. Students will become familiar with the Elizabethan era and learn to appreciate the universality of Shakespeare's art.

English 21
Shakespeare's Plays - Comedies and Histories
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course introduces students to representative comedies and histories of William Shakespeare. The major goals of the course are to help students understand the plays, analyze the language, read and evaluate critical material written on plays, become familiar with the Elizabethan era, and value the universal themes and entertaining qualities of Shakespeare's plays.

English 22
Suspense Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course examines various types of suspense literature from the 19th century to the present. Students read, analyze, discuss, and evaluate examples of the most widely-read and enduring suspense literature forms: mystery, detective, crime, ad psychological suspense fiction. Students also examine the history of suspense literature and the cultural contexts that have given rise to the various suspense genres. Other suspense literature genres may be discussed, including gothic, spy, fantasy, horror, and science fiction.

English 23
Twentieth Century Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on reading and interpreting literature from the two major genres of the twentieth century: Modernism and Postmodernism. Students study the elements, themes, and styles of these genres as they pertain to American and British literature, as well as literature in translation.

English 24A
Creative Writing: Introduction to Poetry
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course is an introduction to the creative process or the creative experience in the writing of poetry including the awareness involved in "seeing" the essence of which a poem is made, the inception of a specific poem, the use of conventions, devices, and techniques - both traditional and contemporary - in the actual writing of a poem, and the development of the student's critical sense in writing and the process of revision. Students will develop a working journal or notebook, a personal voice in writing, and a method for critiquing poetic works.
Note: Letter grade or P/NP option.

English 24B
Creative Writing: Workshop in Poetry
3 units; 3 hours lecture
Prerequisite: English 24A with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course, a continuation of English 24A, is a poetry workshop that emphasizes the development of solid critical standards to be applied to the work of published poets and the student's own work. The student is required to submit poetry for publication. Attention is also given to markets for the student's work.
Note: Letter grade or P/NP option.

English 25A
Creative Writing: Introduction to the Craft of Fiction
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course is an introductory level creative writing course focusing on the short story. In addition to outlining and composing well-crafted stories, students will study the techniques of plot, characterization, point of view, conflict, and setting. Introduction to direct and indirect characterization will be illustrated through the narrative modes of action, description, exposition, and narration.
Note: Letter grade or P/NP option.

English 26
The Literature of Science Fiction
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course examines various types of science fiction from the 20th century to the present. Students read, analyze, discuss, and evaluate examples of the most widely-read and enduring science fiction genres: space adventure, utopian/dystopian, near-future, high-tech, and futuristic human/social interaction. Students also examine the history of science fiction and the cultural contexts that have given rise to the various science fiction genres. Other science fiction genres may be discussed including gothic, suspense, horror, and fantasy.

English 27
Children's Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course introduces students to children's literature, including classic and contemporary works. Literary and artistic qualities are examined with respect to historical and contemporary perspectives. Books for preschoolers to adolescents are read and analyzed.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

English 28
Images of Women in Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course examines images of women in a variety of literary forms, including poetry, short stories, novels, plays, folklore, fairytales, and nonfiction prose. Students become familiar with female archetypes, women's roles, and women's themes as presented by both male and female writers, examining traditional and re-visionist approaches.

English 29
The Short Novel
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
Through an analysis of its history, technique, and meaning, students are encouraged to understand the short novel as a distinctive form of fiction, and to consider the form in its own right as well as in relationship to the short story and the novel. For insight into the development of the short novel genre, students read works by authors of various cultures.

English 30
The English Bible as Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a study of the types of literature used in both the Old and New Testaments of the English Bible. Readings and discussions emphasize analysis of such forms as the short story, poetry, letters, biographical literature, and historical literature.

English 31
Mythology and Folklore
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of Babylonian, Egyptian, Hebrew, Greek, Hispanic, Germanic, aboriginal, Indian, and other mythologies. Through readings of essays and literature, students explore the similarities and differences of folklore and mythology and identify cultural patterns in the literature.

English 32abc
Creative Writing: A Workshop in Fiction
3 units; 3 hours lecture
Prerequisite: English 25A with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course gives intensive study to the forms of the short story. Students will do advanced work in creating characters, strengthening conflict, and building plot. Emphasis will be on classroom discussion of students' own fiction. The course may be taken three (3) times for credit.
Note: Letter grade or P/NP option.

English 33
Autobiographical Literature: Writing the Memoir
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on reading, analyzing, and discussing autobiographies and memoirs by important writers. Students keep journals and use this material to write significant autobiographical pieces, advancing their composition skills and personal investigative strategies.

English 34
The Short Story
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on reading and interpreting the short story and analyzing the evolution, scope, and form of the genre. Students will study the elements, themes, and styles of American and English short stories, as well as literature in translation.

English 35
World Literature, 2500 B.C. to 1650 A.D.
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course examines masterpieces of world literature from the ancient world through the mid-17th century as both reflections and progenitors of their cultures and, eventually, nations of origin. Students explore the universal concerns of humankind as exemplified through the themes, forms, and trends of the literary works.

English 36
World Literature, 1650 to Present
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course examines masterpieces of world literature from the mid-17th through 20th centuries as both reflections and progenitors of their cultures and nations of origin. Students explore the universal concerns of humankind as exemplified through the themes, forms, and trends of the literary works.

English 38
Screen Writing Workshop
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course is a workshop in creating original film screenplays. From analyzing film scripts by professional writers, students learn essential techniques on screenplay writing. The course also provides information on how to begin a career in the film industry, including how to find an agent and how to tailor a script for the marketplace.
Note: Letter grade or P/NP option.

English 39
Literature and Film
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course provides an exploration of literacy works and corresponding feature-length films. Students analyze selected novels and short stories as well as filming techniques. Oral and written Analysis will feature comparisons of the original literary work and its film adaptation.

English 40A
American Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course surveys American literature from its beginnings through the Civil War, including material from several categories: the narratives of native peoples, the literature of discovery and exploration, the literature of Pre-Revolutionary America, the literature of an emerging nation, and the literature of Antebellum America. This course recognizes the contributions of women and minority writers to the national literature.

English 40B
American Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course surveys American literature from the post-Civil War period to the present, including the Literature of an Expanding Nation (1865-1912), the Literature of Modernism (1912-1945), the Literature of Post World War II America (1945-1975), and the Literature of Contemporary America (1975-present). Recognition of the contribution of women and minority writers to the national literature is included.

English 41A
Survey of Film: 1895-1950
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on viewing, analyzing, and writing about film as a narrative reflective of its time and culture. Students study representative film masterpieces from the late 19th century to 1950, the age of television, by viewing films or portions of films. An emphasis is placed on analyzing and writing about the ideas and values portrayed in the films with regards to how they reflect the concerns of particular nationalities and time periods. Students also analyze the growth and transformation of various artistic techniques used by the filmmakers.

English 41B
Survey of Film: 1950 to Present
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on viewing, analyzing, and writing about film as a narrative reflective of its time and culture. Students study representative film masterpieces from 1950 to the present by viewing films or portions of films. An emphasis is placed on analyzing and writing about the ideas and values portrayed in the films with regards to how they reflect the concerns of particular nationalities and time periods. Students also analyze the growth and transformation of various artistic techniques used by the filmmakers.

The hours per week of courses may be adjusted based on the length of the term.

English 42
Chicano/Latino Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course will focus on the analysis and interpretation of Chicano/Latino essays, novels, short stories, and poems. This course will also explore how Chicano/Latino literary texts reflect social and cultural influences.

English 43
African American Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course provides a chronological and thematic survey of African American literature. Students will read and discuss representative works by African American writers. Emphasis will be on classic and contemporary literature.

English 44
The Literature of American Ethnic Groups
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course provides a chronological and thematic survey of American ethnic literature. Students will examine and discuss representative works by members of the following groups: African Americans, Asian Pacific Americans, Chicano/Latino Americans, European and Near Eastern Americans, Jewish Americans, and Native Americans. Emphasis will be contemporary literature.

English 46
Literature and Sexual Identity
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course examines how a culture's ideas about gender identity and sexual orientation affect the form and impact of literature. Materials will include canonical works that reflect themes of dissident sexuality, as well as contemporary works that write openly about the modern gay and lesbian experience.

English 47
California Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course introduces students to literature written about California, and includes historical and cultural backgrounds, regional and ethnic experiences, and unifying themes and motifs. Various literary genres are studied.

English 48
Modern Literature of Latin America
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of modern literature from Latin American countries. Students explore themes common to selected major writers and identify cultural, political, and stylistic patterns in their works.

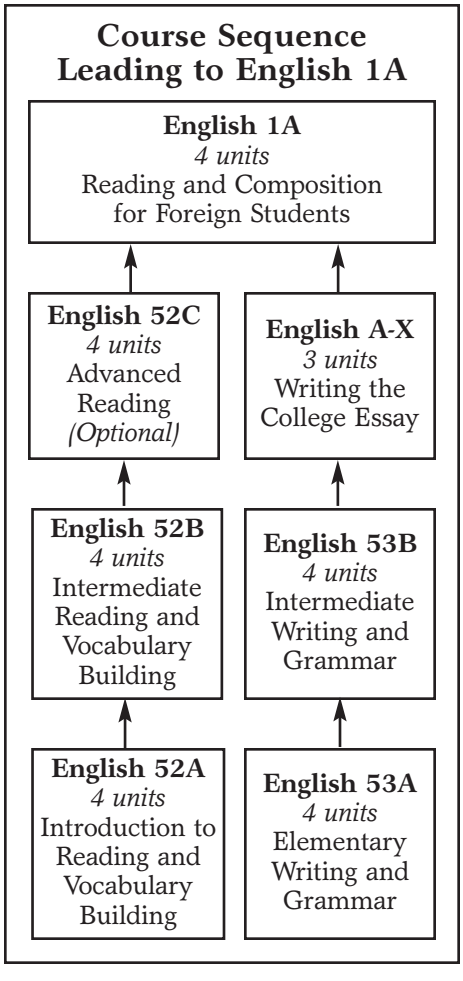
English 50
Special Topics in English
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in English more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

English 98abcd
College Literary Magazine Editing and Publishing
3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course provides students with experience in literary journal publishing. Students will evaluate literary magazines, create submission guidelines, advertise for and collect submissions, learn about the literary journal printing process, proofread and edit submissions, and design and compose layout. In addition, students will organize a public literary reading.

English 99abc
Independent Study in English
1-3 units; hours to be arranged
Enrollment Limitation: two English courses, one of which is English 1A, with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides special advanced studies in a subject field of English not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned English education projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

English 100
Supervised Tutoring: Writing Center Laboratory
0 units; 72 maximum hours lab per semester
Enrollment Limitation: referral by instructor or counselor based on assessed academic need
Non-credit
This course provides students with supervised tutorial instruction on writing text with clarity and reading text with literal and critical understanding; this may include prewriting and pre-reading techniques, organization of text, development of arguments, relationships between parts of text, integration of writing and reading for research and revision/editing for clarity and correctness.
Note: This course is repeatable and open for enrollment at registration and at anytime during the semester.

English as a Second Language



English as a Second Language 01
(pending approval by the California Community Colleges System Office)
Preparation for Naturalization and Citizenship
0 units; 3 hours lecture
Non-credit
This course provides foreign-born students whose first language is not English with basic knowledge of the history of the United States and the structure of American government, and prepares them for passing the written, reading, and oral interview portions of the United States Naturalization Examination.

English as a Second Language 02A
Conversation and Grammar Level I
0 units; 5 hours lecture
Recommended Preparation: concurrent enrollment in English as a Second Language 03A
Non-credit
This Level 1 conversation and grammar course provides focused practice on English grammar forms and structures through listening, speaking, reading, and writing activities. Emphasis is on the verb "be," the simple present tense, nouns, adjectives, prepositions, statements, and questions. Capitalization and punctuation rules are also introduced and applied in writing simple sentences.

English as a Second Language 02B
Conversation and Grammar Level II
0 units; 5 hours lecture
Recommended Preparation: qualification by assessment or completion of English as a Second Language 02A; concurrent enrollment in English as a Second Language 03B
Non-credit
This Level II conversation and grammar course provides focused practice on English grammar forms and structures through listening, speaking, reading, and writing activities. Emphasis is on prepositions of time, possessive nouns and adjectives, present progressive and simple past tense, modals of ability and suggestion, imperatives, and punctuation rules.

English as a Second Language 02C
Conversation and Grammar Level III
0 units; 5 hours lecture
Recommended Preparation: qualification by assessment or completion of English as a Second Language 02A and 02B; concurrent enrollment in English as a Second Language 03C
Non-credit
This Level III conversation and grammar course provides focused practice on English grammar forms and structures through listening, speaking, reading, and writing activities. Emphasis is on verb tenses, direct/indirect objects, modals, comparatives, superlatives, count and non-count nouns, and quantifiers.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

English as a Second Language 02D
Conversation and Grammar Level IV
0 units; 5 hours lecture
Recommended Preparation: qualification by assessment or completion of English as a Second Language 02C; concurrent enrollment in English as a Second Language 03D
Non-credit
This Level IV conversation and grammar course provides focused practice on English grammar forms and structures through listening, speaking, reading, and writing activities. Emphasis is on the continuous and perfect tenses, transitive and intransitive verbs, irregular verb forms, the passive voice, participial adjectives, and idioms.

English as a Second Language 03A
Reading and Writing Level I
0 units; 5 hours lecture
Recommended Preparation: concurrent enrollment in English as a Second Language 02A
Non-credit
This Level I reading and writing course is designed to improve reading comprehension, increase vocabulary, and improve critical thinking and writing skills. Students will write descriptive and chronologically ordered paragraphs.

English as a Second Language 03B
Reading and Writing Level II
0 units; 5 hours lecture
Recommended Preparation: qualification by assessment or completion of English as a Second Language 03A; concurrent enrollment in English as a Second Language 02B
Non-credit
This Level II reading and writing course is designed to improve reading comprehension, increase vocabulary, and improve critical thinking and writing skills. Students will write descriptive, instructional, biographical, narrative, and subjective paragraphs.

English as a Second Language 03C
Reading and Writing Level III
0 units; 5 hours lecture
Recommended Preparation: qualification by assessment or completion of English as a Second Language 03B; concurrent enrollment in English as a Second Language 02C
Non-credit
This Level III reading and writing course is designed to improve reading comprehension, increase vocabulary, and improve critical thinking and writing skills. Students will write paragraphs using chronological order, emphatic order, and spatial order.

English as a Second Language 03D
Reading and Writing Level IV
0 units; 5 hours lecture
Recommended Preparation: qualification by assessment or completion of English as a Second Language 03C; concurrent enrollment in English as a Second Language 02D
Non-credit
This Level IV reading and writing course is designed to provide students with strategies to improve reading comprehension and writing skills. Reading practice activities will be presented to increase vocabulary, use context for determining meaning of texts, and develop critical thinking skills. In writing, students will study a variety of grammatical structures and transitional expressions to help generate simple expository paragraphs.

English as a Second Language 50
Special Topics in English as a Second Language
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in English as a Second Language more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

English as a Second Language 51A
Introduction to English in Conversation
4 units; 5 hours lecture
Recommended Preparation: qualification by assessment
Credit, not degree applicable
This introductory course is designed to activate a student's English-speaking and English-comprehension skills in a supportive atmosphere. The course includes cross-cultural communication topics; role play and other small group activities; introduction to common American idioms and expressions; pronunciation exercises designed to improve intelligibility; and listening comprehension practice.

English as a Second Language 51B
Intermediate Listening, Speaking and Pronunciation
4 units; 5 hours lecture
Prerequisite: ESL 51A with a minimum grade of C or qualification by assessment
Credit, degree applicable
Students in this course gain greater confidence and skill in listening to and speaking English by participating in activities such as listening to mini-lectures and taking notes, presenting impromptu speeches, prepared speeches, and oral reports; conducting surveys and interviews; performing role plays and dramas; and discussing and debating controversial topics. Students improve their pronunciation, intonation and stress, listening comprehension, and knowledge of idiomatic expressions and American culture and humor.

English as a Second Language 51C
Advanced Listening, Speaking and Pronunciation
4 units; 5 hours lecture
Prerequisite: ESL 51B with a minimum grade of C or qualification by assessment
Credit, degree applicable
This course provides advanced instruction in oral English skills, emphasizing pronunciation, communication, and correction of common errors. A listening program related to lecture materials prepares students for courses across the curriculum. Cross-cultural interaction, group presentations, and speeches are part of the course.

English as a Second Language 52A
Introduction to Reading and Vocabulary Building
4 units; 5 hours lecture
Recommended Preparation: qualification by assessment
Credit, not degree applicable
This is an introductory course designed to transfer literacy in the first language to English by building basic reading skills and expanding vocabulary. Through the use of reading texts, reading kits, main idea exercises, and skimming and scanning activities, the foundation skills are developed through regular application. The aim of the course is to identify and reinforce good reading habits and to free students from over-dependence on dictionaries, with a focus on context as the key to meaning.

The hours per week of courses may be adjusted based on the length of the term.

English as a Second Language 52B
Intermediate Reading and Vocabulary Building
4 units; 5 hours lecture
Prerequisite: ESL 52A with a minimum grade of C or qualification by assessment
Credit, degree applicable
This is an intermediate level course designed to teach appropriate reading skills, such as the ability to make inferences, draw conclusions, understand the meaning of vocabulary words in context through word analysis and contextual clues, and determine the main idea from a passage. Students read from a variety of sources, including newspapers, essays, short stories, and novels. Students also increase their academic vocabulary through vocabulary building activities.

English as a Second Language 52C
Advanced Reading
4 units; 5 hours lecture
Prerequisite: ESL 52B with a minimum grade of C or qualification by assessment
Credit, degree applicable
The purpose of this course is to provide interpretive, critical and analytical reading skills for fiction and nonfiction genres. It includes an in-depth study of a novel and the language necessary to discuss and write critically about what is read.

English as a Second Language 53A
Elementary Grammar and Writing
4 units; 5 hours lecture
Recommended Preparation: qualification by assessment
Credit, not degree applicable
This entry-level academic composition course offers students an intensive writing experience. Students will write well-organized and coherent paragraphs transitioning to multi-paragraph essays. Students will identify and address grammar problems in their writing.

English as a Second Language 53B
Intermediate Writing and Grammar
4 units; 5 hours lecture
Prerequisite: ESL 53A with a minimum grade of C or qualification by assessment
Credit, degree applicable
*Transfer CSU, UC**
This intermediate-level academic composition course offers students an intensive experience in writing college essays. Students will learn to write well-organized, coherent expository essays, including critical reactions to readings, and employing various rhetorical modes. Basic rules of grammar are reviewed and more advanced rules are introduced.

English as a Second Language 54
American Culture for ESL Students
2 units; 2 hours lecture
Recommended Preparation: ESL 51B, ESL 52B, and ESL 53B
Credit, degree applicable
This ESL students to succeed in college-level courses by introducing them to traditional and changing values in the United States such as individualism, self-reliance, pragmatism, and consumerism. Students will learn how these values affect education, family life, and popular culture. Students will improve their English language skills by analyzing television shows, movies, magazine and newspaper articles, as well as by conducting informal surveys and observation tasks.

English as a Second Language 55
English as a Second Language for College Students
4 units; 5 hours lecture
Prerequisite: ESL 53A with a minimum grade of C or qualification by assessment
Credit, degree applicable
Transfer CSU
This is an intermediate level ESL course designed for students with college and university goals. It helps academically-oriented students to master many of the structures in the English language necessary for success in college. These include question formation, articles, verb tense and time, modal auxiliaries, conditional sentences, and idiomatic expressions. Speaking, listening, reading and writing are all involved in this reinforcement course.

Environmental Horticulture

Horticulture 41
General Horticulture
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course will provide a foundation for the care and culture of plants with an emphasis on landscape and nursery management. Topics include soil preparation and plant selection, turf grass selection, installation and care, landscape design, nursery management, plant propagation, integrated pest management, house plants, and basic botany and physiology. Career opportunities in horticulture will also be discussed.

Horticulture 42
Plant Propagation
3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
Plant reproduction techniques will be studied and practiced with an emphasis on asexual (vegetative) propagation methods such as grafting, budding, layering, cuttings, and tissue culture. Sexual propagation (flower/seed), preparation and use of growing mediums, and operations of greenhouse and shade house structures will also be covered.

Horticulture 44
Ecology of Edible, Medicinal and Poisonous Plants
3 units; 2 hours lecture, 3 hours lab to be arranged
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course, students will develop an awareness and appreciation of plants and their effect on humans over the centuries. Students will survey ornamental and native plant communities with emphasis on flowering plants, ecology, economic uses, and identification. Students will perform lab work primarily in the field. Field lab sites will be in the chaparral, forest, and desert.

Horticulture 46
Pest Control
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84 and Mathematics 40
Credit, degree applicable
Transfer CSU
This course will emphasize the concepts of landscape and pest management. Identification and control of potential pests and diseases, and their habits, hosts, and seasonal history will be studied. Chemical, biological and integrated pest management, as well as the laws and regulations affecting pest control, will be discussed.

Horticulture 50
Special Topics in Horticulture
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Horticulture more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Environmental Horticulture – A.S. Degree and Certificate of Achievement

(Natural Sciences Division)

A student completing the degree or certificate requirements will be able to manage various landscape environments such as vegetable and flower gardens, turfgrass, houseplants, soils, cut flowers, and terrariums. A student will be able to apply fertilizers and pesticides (natural, chemical, biological, and cultural). The student will be able to propagate plants via grafting, budding, tissue culture, cuttings, specialized stems, and sexual means as well as demonstrate knowledge of various propagation structures. The student will be able to identify landscape plants (herbaceous, shrubs, trees) and identify their morphology. Outcomes of the program will be measured by the student's ability to design a landscape, make landscape management recommendations, and obtain employment in the industry.

El Camino College Major Requirements
At least 50% of the requirements for the major must be completed at El Camino College.
Horticulture 41, 42, 46, 53, 54, 55, 56; one course from: Biology 15, 16, Horticulture 44, 60, 95abcd
Total Units: 23-25

Certificate of Achievement
A Certificate of Achievement will be awarded upon completion of the courses listed below. At least 50% of the requirements for the certificate must be completed at El Camino College.
Horticulture 41, 42, 46, 53, 54, 55, 56; one course from: Biology 8, 15, 16, Horticulture 44, 60, 95abcd
Total Units: 23-25

Horticulture 53
Soils and Fertilizers
3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 84 and Mathematics 40
Credit, degree applicable
Transfer CSU
This course examines the origin, formation, structure, and composition of soils and the elements of plant nutrition. Soil analysis and methods of determining proper amounts of fertilizer and amendments will be explored. The effects of different fertilizers and their application will also be discussed.

Horticulture 54
(formerly 52B)
Landscape Design
3 units; 3 hours lecture
Recommended Preparation: Horticulture 55 and 56; eligibility for English 84
Credit, degree applicable
Transfer CSU
This course introduces the principles of landscape design and basic drafting techniques to guide the student through the process of creating formal drawings for residences. Selection and placement of plant materials according to texture, color, mass, and cultural requirements for the intended landscape use will be explored.

Horticulture 55
Plant Identification - Trees
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
In this course, students will identify approximately 160 trees commonly used in Southern California landscapes. The landscape uses, growth habits, and cultural requirements, as well as the morphological characteristics, of these trees will be studied.

Horticulture 56
Plant Identification - Shrubs, Vines, and Groundcovers
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
In this course, students will identify approximately 160 shrubs, vines, and groundcovers commonly used in Southern California landscapes. The landscape uses, growth habits, and cultural requirements, as well as the morphological characteristics, of these plants will be studied.

Horticulture 60
Basic Landscape Irrigation
3 units; 2 hours lecture; 3 hours lab
Recommended Preparation: eligibility for Mathematics 23
Credit, degree applicable
Transfer CSU
This course introduces the basics of residential and small commercial landscape irrigation and determining the water demand and the water availability of a landscape site. Selection of sprinklers, proper sizing of pipe, and selection of irrigation controllers as well as typical irrigation materials and assembly techniques will be explored. Low volume irrigation systems will also be discussed.

Horticulture 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Environmental Horticulture Science field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Horticulture 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Horticulture with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides the student an opportunity to explore research problems in Environmental Horticulture not covered in the regular departmental offerings through laboratory and field projects. Regular conferences with the instructor are coordinated with assigned laboratory work and/or research projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Environmental Technology

Environmental Technology 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Environmental Technology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Environmental Technology 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Environmental Technology with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work.
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Environmental Technology not covered in the regular departmental listings. Regular conferences with the instructor are coordinated with assigned Environmental Technology projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Environmental Technology 100
Environmental Technology
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU, UC
This course covers environmental hazardous materials, global and national environmental issues, governmental regulatory process, ecology, and occupational safety and health. In addition, basic biological, chemical and physical principles, pollution of air, water and soil, and pollution prevention are presented. Students will study the relationship among science, technology and human activities within the environment.

Environmental Technology – A.S. Degree and Certificates of Achievement

(Industry and Technology Division)

The environmental technology curriculum provides training in environmental hazardous materials handling and regulatory compliance consistent with requirements found in the Code of Federal Regulations (CFR). By completing the certificate or degree requirements, students gain proficiency in pollution prevention, regulatory agency requirements, health effects of hazardous materials, hazardous waste management, safety and emergency response, and occupational safety and health. Emphasis is placed on preparing the students for employment as environmental technicians within several industrial areas including electroplating, metal finishing, printed circuit board production, oil refining and chemical production, steel production, general manufacturing, printing and graphic reproduction, agriculture processes, and consumer services industry. Competencies will be assessed regularly by student performance in the classroom and laboratory.

El Camino College Major Requirements
Chemistry 21A, Biology 15, Computer Information Systems 13, Environmental Technology 100, 110, 120, 130, 140, 150
Total Units: 31

Certificates of Achievement
A Certificate of Achievement will be granted to the student who completes the requirements in the Environmental Technology Hazardous Materials option or the Environmental Technology Occupational Safety and Health option. At least 50% of the requirements for the Certificate of Achievement must be completed at El Camino College.
Environmental Technology Hazardous Materials Option:
Chemistry 21A, Biology 15, Computer Information Systems 13, Environmental Technology 100, 110, 120, 130, 140, 150
Total Units: 31
Environmental Technology Occupational Safety and Health Option:
Chemistry 21A, Biology 15, Computer Information Systems 13, Environmental Technology 100, 120, 200, 210
Total Units: 22

Environmental Technology 110
Hazardous Waste Stream Generation, Reduction, Treatment
3 units; 3 hours lecture
Recommended Preparation: English A, Chemistry 21A, and Mathematics 40 or equivalents
Credit, degree applicable
Transfer CSU
This course will cover the study of industrial processes and their generation of waste streams in seven selected industries: electroplating, metal finishing and printed circuit board production, oil refining and chemical production, steel production, general manufacturing, printing and graphic reproduction, agriculture and consumer services. The course will center on various raw materials and chemicals used in industry, examining the changes that occur as they move through the industrial process, as well as understanding the material balance concept of inventory. Throughout the course, discussion of applicable regulations will be included, and the importance of waste minimization/treatment concepts will be stressed. Home hazardous waste generation and reduction will also be considered.

Environmental Technology 120
Health Effects of Hazardous Materials
3 units; 3 hours lecture
Recommended Preparation: Environmental Technology 100; Biology 15 or high school biology or equivalent
Credit, degree applicable
Transfer CSU
This course covers the acute and chronic health effects produced by exposure to chemical, physical, and biological agents. Emphasis will be on those hazardous materials commonly associated with industrial operations, waste disposal and remediation sites. Topics will include routes of entry, toxic effects, risk evaluation, permissible exposure limits, medical surveillance, control methods for reducing exposure, and understanding a Material Safety Data Sheet (MSDS).

The hours per week of courses may be adjusted based on the length of the term.

Environmental Technology130
Hazardous Waste Management Applications
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Environmental Technology 100
Credit, degree applicable
Transfer CSU
This course provides an overview of hazardous waste regulation with emphasis on generator compliance, site investigation and remediation, permitting, enforcement, and liability. The lecture portion of the course explains the hazardous waste regulatory framework, introduces the wide variety and types of environmental resources available, and develops research skills in the hazardous waste area. The laboratory portion of the course complements the lectures by providing "hands-on" application of the regulations at the technician level. Proper methods of preparing a hazardous waste manifest, labeling of storage containers, sampling and analysis, preparing a Phase 1 Environmental Audit, and selecting environmental consultants among the many skills developed in the laboratory.

Environmental Technology 140
Hazardous Materials Management Application
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Environmental Technology 120; Chemistry 21A or equivalent
Credit, degree applicable
Transfer CSU
This course is the study of the requirements and applications of federal, state and local laws and regulations relating to hazardous materials. This course will emphasize compliance with Department of Transportation, Occupational Safety and Health Administration (OSHA) Hazard Communication, Superfund Amendments and Reauthorization Act (SARA) Title III Community Right to Know, Underground Tank, Asbestos, Proposition 65, and Air Toxics Regulations. The lecture portion of the course will provide the student with an understanding of the legal framework of hazardous materials laws; the laboratory portion will focus on applications of these laws, such as: proper labeling, shipping, and handling of hazardous materials; obtaining and interpreting Materials Safety Data Sheets (MSDS's); permitting and monitoring functions, as well as planning and reporting functions.

Environmental Technology 150
Safety and Emergency Response
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: Environmental Technology 120 or equivalent
Credit, degree applicable
Transfer CSU
This course is designed to provide students with instruction in safety and emergency response to chemical and physical exposures in industrial and field settings. Topics include: hazard analysis, contingency planning, housekeeping and safety practices including proper use of instruments, incident response planning, emergency response including field exercises in the use of personal air purifying respirator and self-contained breathing apparatus, and an understanding of the Incident Command Structure (ICS) system. This course satisfies the requirements for generalized employee training under Occupational Safety and Health Administration (OSHA 1910.120).

Environmental Technology 160
Hazardous Materials Technician
1 unit; 16 hours lecture, 24 hours lab (one week course)
Recommended Preparation: English A and Mathematics 40 or equivalent
Credit, degree applicable
Transfer CSU
This course provides certification that students have completed the 40 hour Hazardous Waste Operator Emergency Response (HAZWOPER) Occupational Safety Health Act (OSHA) (1910.120) required training. The training includes hands-on instruction in safety and emergency response to chemical and physical exposures in industrial and field settings.
Note: Pass/no pass only.

Environmental Technology 200
Occupational Safety and Health
3 units; 3 hours lecture
Recommended Preparation: Environmental Technology 100 and 120; English A
Credit, degree applicable
Transfer CSU
This course covers the study of the laws and regulations pertaining to industrial occupational safety and health. The history of occupational safety and health leading to current legislation, along with the development of the Occupational Safety and Health Administration (OSHA) will be presented. Students will gain a working knowledge of worker's compensation and benefits laws, coupled with personal factors in safety, product safety and liability, and monitoring hazards in the workplace.

Environmental Technology 210
Occupational Safety and Health Management
3 units; 3 hours lecture
Recommended Preparation: Environmental Technology 100 and 120; English A
Credit, degree applicable
Transfer CSU
This course covers the study of a manager's responsibility for safety, hazard communication laws and regulations, machine and mechanism safety and accident investigation. In addition, topics pertaining to industrial safety practices regarding fire prevention, radiation, electrical systems and related industrial biological agents and threshold values will be discussed.

Escrow
See Real Estate

Ethnic Studies

Ethnic Studies 1
Introduction to Ethnic Studies
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course provides a multidisciplinary introduction and analysis of ethnic groups in the United States. Various theories and perspectives will be examined to better comprehend the effects of institutional racism, marginalization, socio-economic and political discrimination, and ethnocentrism on American ethnic and racial groups.

Ethnic Studies – A.A. Degree

(Behavioral and Social Sciences Division)

The degree in ethnic studies provides students with an interdisciplinary foundation for the study of American ethic groups. The degree can be earned in a single ethnic subject category or in the combined American cultures option. The curriculum incorporates a range of cultural, historical, political, and sociological methodologies that provide students with a theoretical framework for analysis of the contributions, role and major issues of African Americans, Asian Americans, Chicanos, and Native Americans. Students will apply these theoretical perspectives to analyze socioeconomic and political factors that confront ethnic minorities as they interact with the majority society. Competencies will be assessed through examinations, essays, research papers, and directed projects.

El Camino College Major Requirements
African American Studies Option:
English 43, Ethnic Studies 1, History 12A, 16A, 16B, Psychology 10; six units from: Art 9, English 44, History 12B, 32, Music 13, Political Science 5, Sociology 104, 107
Total Units: 24
American Cultures Option:
Ethnic Studies 1; 15 units from: Anthropology 6, Art 7, English 42, 43, 44, History 9, 16A, 16B, 17, 32, Psychology 10, Sociology 107; six units from: American Studies 3, Anthropology 2, History 12A, 12B, 14A, 14B, 19, Music 13, Political Science 5, Sociology 104
Total Units: 24
Asian American Studies Option:
English 44, Ethnic Studies 1, History 14A, 14B, Political Science 5, Sociology 107; six units from: Art 5A, 5B, 6, Japanese 25, Sociology 104
Total Units: 24
Chicano Studies Option:
Art 7, English 42, Ethnic Studies 1, History 17, 19, Political Science 5; six units from: American Studies 3, English 44, History 32, Sociology 104, 107
Total Units: 24
Native American Studies Option:
Anthropology 6, English 44, Ethnic Studies 1, History 9, Political Science 5, Sociology 107; six units from: Anthropology 2, 7, 8, Art 7, Sociology 104
Total Units: 24

Family and Consumer Studies – A.A. Degree

(Industry and Technology Division)

The degree is designed for students planning to transfer with a major in family and consumer studies. By completing the degree requirements, students acquire a foundation in fashion design, interior design, and nutrition and foods. Students will be able to relate nutrition to health and food preparation and the use of textiles to clothing construction and interior design as well as apply the principles of consumer economics and fashion analysis and selection. Competencies will be assessed regularly by student performance in the classroom and laboratory through examinations and portfolios.

El Camino College Major Requirements
Family and Consumer Studies 38; Fashion 10ab, 20, 41; Interior Design 30, 39; Nutrition and Foods 11, 14
Total Units: 22

Preparation for the Transfer Major
For information of specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Family and Consumer Studies

Family and Consumer Studies 3
Family and Consumer Studies Introduction to Macintosh
1 unit; 0.5 hour lecture, 1.5 hours lab
Credit, degree applicable
Transfer CSU
In this course the student is introduced to the basic operation of the Macintosh computer. The software learned in this course will be reinforced in Family and Consumer Studies project assignments.
Note: Same as Fashion 3, Interior Design 3, Nutrition and Foods 3.

Family and Consumer Studies 20
Textiles
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This introductory course covers characteristics of textiles for Family and Consumer Studies majors. Students are introduced to: various fibers, yarn types, fabrication, coloring, printing and finishing methods. Selection, use and care of textiles are emphasized.
Note: Same as Fashion 20 and Interior Design 20.

Family and Consumer Studies 38
Consumer Economics
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course is a study of the marketplace and its impact on consumer choices, values and spending habits. Topics include: money management, influences of legislation and inflation, use of credit, transportation, housing, health care, taxes, insurance, investments and retirement.

Fashion

Fashion 1
Career Opportunities in Fashion
1 unit; 1 hour lecture
Credit, degree applicable
Transfer CSU
This course surveys career opportunities in fashion. Students will explore the uniqueness of both themselves and the industry in all of its complexity through classroom exercises and visits in the field.

Fashion – A. S. Degree and Certificates of Achievement

(Industry and Technology Division)

The fashion program prepares students for employment in the field of design and production or merchandising and provides upgrade opportunities for currently employed personnel. Upon completing the degree or certificate requirements, students gain proficiency in clothing, construction, fashion illustration, pattern making, draping, computer aided fashion design, and manufacturing. Students completing the requirements for the merchandising option will also gain proficiency in presentation techniques, planning, promotion, fashion coordination, advertising, and sales. Competencies will be assessed by portfolios and exhibitions of original apparel design and garments. Students may expect to enter industry as a design assistant, costume technician, fashion consultant, stylist, entry-level pattern maker, quality control assistant, assistant merchandiser, or sales associate.

El Camino College Major Requirements
At least 50% of the major requirements for the Associate in Science Degree must be completed at El Camino College.
Fashion Design and Production Option: Fashion 1, 2, 3, 4ab*, 10ab*, 14, 15ab*, 17ab*, 20, 26A, 26B, 29ab*, 35, 41, Art 10ab*, (*one semester of)
Total Units: 31
Fashion Merchandising Option: Fashion 1, 2, 3, 4ab*, 10ab*, 15ab*, 20, 27, 28, 35, 41,42; Business 22 (*one semester of)
Total Units: 28

Certificates of Achievement
A Certificate of Achievement will be awarded to the student who completes the courses in one of the following options: Computer Pattern Making Technician or Costume Technician or Fashion Design and Production or Fashion Merchandising or Fashion Stylist. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.
Computer Pattern Making Technician Option (pending approval by the California Community Colleges System Office): Fashion 11ab, 14, 15ab, 26A, 29ab
Total Units: 12
Costume Technician Option: Fashion 10ab, 11ab, 17ab, 24abc, 31, 35, 41; Theatre 94
Total Units: 21
Fashion Design and Production Option: Fashion 1, 2, 3, 4ab*, 10ab*, 14, 15ab*, 17ab*, 20, 26A, 26B, 29ab*, 35, 41, 95abcd (2-4 units); three courses from the following: Fashion 11ab*, 16ab*, 24abc*, 31, 36, 37; Art 10ab*, 37ab* (*one semester of)
Total Units: 38-41
Fashion Merchandising Option: Fashion 1, 2, 3, 4ab*, 10ab*, 15ab*, 20, 27, 28, 35, 41, 42; Fashion 95abcd (2-4 units); Business 15, 22; two courses from the following: Business 12, 13, 14, 21, 27 (*one semester of)
Total Units: 40-42
Fashion Stylist Option: Fashion 10ab, 23, 31, 35, 41, 42, 95abcd (2 units)
Total Units: 18

Fashion 2
Presentation Techniques for Fashion
1 unit; 0.5 hour lecture, 1.5 hours lab
Credit, degree applicable
Transfer CSU
This course will assist the student in developing techniques for fashion presentation. Basic concepts and techniques of applied design, including media presentation methods and visual communication are studied.

Fashion 3
Fashion Introduction to Macintosh
1 unit; 0.5 hour lecture, 1.5 hours lab
Credit, degree applicable
Transfer CSU
The student is introduced to the basic operation of the Macintosh computer. The software learned in this course will be reinforced in Fashion design for project assignments.
Note: Same as Family and Consumer Studies 3, Interior Design 3, Nutrition and Foods 3.

Fashion 4ab
Computer Fashion Illustration
1 unit; 0.5 hour lecture, 1.5 hours lab
Prerequisite: Fashion 3 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course incorporates the use of a computer aided garment detail library with an illustrative software to sketch, illustrate and design apparel groups. Students will design and develop line sheets, cost sheets and hang tags for advertising.

Fashion 10ab
Clothing Construction I
3 units; 2 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU
This course provides the analysis and application of basic clothing construction techniques used on woven and knit garments emphasizing pattern and fabric selection, seam and garment construction and finishing. Students will be trained on the proper use and care of the sewing and overlock machine. Consumer decision-making is emphasized.

Fashion 11ab
Clothing Construction II
3 units; 2 hours lecture, 3 hours lab
Prerequisite: one semester of Fashion 10ab with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course offers a study and development of contemporary garment construction using advanced techniques and procedures. Projects include garments made of a currently fashionable but "difficult to handle" fabric. Emphasis is placed on experimentation of the appropriate application of various techniques and procedures in construction garments with workmanship of high quality.

Fashion 14
Pattern Grading
1 unit; 0.5 hours lecture, 1.5 hours lab
Prerequisite: Fashion 26A with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course covers sizing commercial and individual patterns for the adult run of sizes.

The hours per week of courses may be adjusted based on the length of the term.

Fashion 15ab
Fashion Sketching
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Art 10ab with a minimum grade of C
Credit, degree applicable
Transfer CSU
Sketching and media techniques for fashion design and merchandising students are studied. Instruction includes the developing of fashion figure (croqui) drawing (men, women and children) in relation to proportion and scale. Students apply basic techniques of drawing a descriptive garment trade sketch. Fabric rendering using pencil, pen and ink, felt tip pens and markers is expected.

Fashion 16ab
Fashion Illustrating
2 units;1 hour lecture, 3 hours lab
Prerequisite: one semester of Fashion 15ab with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
The course emphasizes drawing the fashion figure in detailed proportion using different media. Projects will cover fabric rendering, advertising, illustration and preparing the student for portfolio presentation. Emphasis is placed on developing apparel design by rendering designs with use of appropriate software for the apparel industry.

Fashion 17ab
Decorative Textiles
1 unit; 0.5 hour lecture, 1.5 hours lab
Credit, degree applicable
Transfer CSU
This course covers decorative techniques applied to fabrics. Designer details will be applied using the following techniques: beading, dyeing, printing, machine embroidery, painting and quilting.
Note: Letter grade or P/NP option.

Fashion 20
Textiles
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This introductory course covers characteristics of textiles for Fashion Design majors. Students are introduced to: various fibers, yarn types, fabrication, coloring, printing and finishing methods. Selection, use and care of textiles are emphasized.
Note: Same as Family and Consumer Studies 20 and Interior Design 20.

Fashion 23
Fitting and Alterations
2 units; 1 hour lecture, 3 hours lab
Prerequisite: one semester of Fashion 10ab with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course teaches alteration and repair of Ready-to-Wear (RTW) clothing and commercial patterns to conform to body contours by analysis of problem areas and by using principles and methods of sewing techniques for the dressmaker, tailor and home sewer.

Fashion 24abc
Tailoring
3 units; 2 hours lecture, 3 hours lab
Prerequisite: one semester of Fashion 10ab with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course covers the principles and techniques of hand, machine and speed tailoring of garments commonly used by the tailor, costume technician and apparel designer.

Fashion 26A
Basic Design and Patternmaking
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Fashion 11ab with a minimum grade of C or concurrent enrollment
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course covers flat pattern methods for dress and separates apparel using the basic sample size for women's and girls' wear.

Fashion 26B
Basic Dress Design Through Draping Process
3 units; 2 hours lecture, 3 hours lab
Prerequisite: one semester of Fashion 10ab with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course is the study of draping techniques to create original garment designs. The draping process is the development of a garment through fabric manipulation directly on a dress form. To maintain design integrity, this course emphasizes the relationship of the fabric hand, color print and structure so students will be able to solve unfamiliar design problems.

The hours per week of courses may be adjusted based on the length of the term.

Fashion 27
Fashion Merchandising
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course introduces students to the fashion merchandising industry and its philosophies. The course content includes an overview of the fashion industry and careers in merchandising as well as planning, selecting, selling, and promoting fashion merchandise. Also covered are the math principles required for merchandising and tracking fashion trends.

Fashion 28
Visual Merchandising
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course students are introduced to the basic concepts, techniques, and planning procedures for the visual approach to selling merchandise. Current methods of visual merchandising are discussed including the use of mannequins, signage, and marketing as well as store planning and layout.

Fashion 29ab
Computer Pattern Design/Patternmaking
3 units; 2 hour lecture, 3 hours lab
Prerequisite: Fashion 3 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course covers the application of computer pattern aided design Gerber AccuMark software. Students will draft and manipulate basic blocks and garment styles. Students will work in teams to simulate the work environment.
Note: Letter grade or P/NP option.

Fashion 31
History of Costume
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course covers the important periods of costume design and their effects and relationships to political, social and economic conditions of the times and how they have influenced life style and culture. Emphasis is placed on both aesthetic and functional aspects of costumes and their importance in the evolution and inspiration of modern dress.

Fashion 35
Applied Color Theory
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course students are introduced to the essential theories of color perception and applied problems involving color interaction phenomenon, effects, and function that occur in fashion design. Students will use color as a visual language to modify space perception and to generate an emotional response when applied to fashion.

Fashion 36
Advanced Apparel Pattern Making and Draping Design
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Fashion 25, 26A and 26B with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This course continues the study of flat pattern drafting and draping methods to produce apparel patterns quickly and accurately. For the development of design skills, students create individual projects that have unusual drafting angles and intricate draping details.

Fashion 37
Design for Apparel Manufacture
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Fashion 14, 36; one semester of 15ab and 29ab with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This course covers the development of "designing a line of clothing" using industry production techniques and equipment, from sketch to pattern and final construction.
Note: This course is offered spring semester only.

Fashion 41
Fashion Analysis and Selection
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course students are introduced to the societal importance of apparel and personal appearance. Emphasis is placed on social, psychological, cultural, and physical clothing needs. Additional topics covered include the history of fashion design, elements and principles of design, wardrobe planning, identifying quality, and clothing care, fit, and purchasing.

Fashion 42abc
(formerly 42)
Fashion Show Production and Promotion
3 units; 2 hours lecture, 2 hours lab plus 18 hours to be arranged
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course is a study of the directing and coordinating of fashion promotions, the psychology used in the marketing of fashion products, the functions of the fashion coordinator, and the techniques and procedures for presenting fashion. Students will evaluate advertising campaigns and participate in two promotions.

Fashion 50
Special Topics in Fashion
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Fashion more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Fashion 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Fashion field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Fashion 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Fashion with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Fashion not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Fashion projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Fashion 100
Fashion Studio
0 units; minimum 1 hour lab per semester
Non-credit
This course provides the fashion student as well as other interested students with individualized instruction related to apparel projects. Student will receive instruction in proper techniques appropriate to their specific project. Students will apply designing or sewing skills to specific areas of construction, and computer assistance with fashion software will be available.
Note: This course is repeatable.

Film/Video

Film/Video 1
Film Analysis and Appreciation
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course, students will investigate the origins and aesthetics of cinema including the classic Hollywood narrative film and its alternatives. By analyzing representative films as unique cultural products, the student will be introduced to various methods of interpreting and evaluating motion pictures within their socio-political context.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Film/Video – A.A. Degree and Certificate of Achievement

(Fine Arts Division)

By completing the degree or certificate requirements, students gain both theoretical and practical knowledge in film/video production, scriptwriting, and media aesthetics. The curriculum prepares students for either entry-level employment in the entertainment and telecommunications industries or for transfer to a four-year degree program. Upon completion of the required courses, students will be able to write, shoot, and edit short films or videos and demonstrate basic skills necessary for operating various film, video, and digital production equipment. Degree and certificate competencies will be assessed regularly by evaluating student performance in producing individual and group projects.

El Camino Major Requirements
Film/Video 1, 3, 20, 22; 11-12 units from: English 38, Film/Video 4, 21, 24, 28ab, 32ab, 34ab, 36ab, 52, 53, 54abc, 95abcd (2-4 units), Photography 51
Total Units: 23-24

Certificate of Achievement
Film/Video Production: A minimum of 12 units must be completed at El Camino College.
Film/Video 1, 20, 22, 24, 28ab; two courses from the following: Film/Video 21, 32ab, 34ab, 36ab
Total Units: 21

Film/Video 3
Screenplay Analysis
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This is an introductory course in which the student will analyze the underlying story structure of motion pictures, short films, and television programs. Through screenings, lectures, and writing exercises, students will learn the basic components of an effective, unified script that connects with its intended audience. Special attention will be paid to the classical Hollywood model of storytelling and how this paradigm can be used for developing scripts for both fiction and non-fiction productions.

Film/Video 4
Story Development
3 units; 3 hours lecture
Prerequisite: English 1A with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course provides students with a framework for developing dramatic stories for movies and television. Prior to writing a screenplay, students will research and develop an original idea for a screen story. Emphasis will be placed on developing main theme, structure, characters, plot outline, and on writing the treatment.

Film/Video 20
Introduction to Film/Video Production
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This introductory course surveys basic camera, lighting, editing, and sound techniques and their use in producing films and videos.

Film/Video 21
Audio Production
3 units; 2 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU
This course is an introduction to production and postproduction sound for various mediums including motion pictures, television, and radio. Basic techniques common to these mediums will be covered including analog and digital recording, audio editing, sound design, and mixing.

Film/Video 22
Production I
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Film/Video 20 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course explores the basic concepts and techniques of professional film/video production. Students will create films and videos using professional single-camera production methods.

Film/Video 24
Production Planning
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course provides students with the skills needed for effectively planning production projects for various entertainment and corporate industries. Financing, script development, budgeting, scheduling, and marketing will be covered.

Film/Video 28ab
Television Production
3 units; 2 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU
This course is a study of production principles and procedures common to all television and media productions from conceptualization to completed project. The emphasis is on scripting, planning, directing, editing, and other skills unique to audio/video media. Budgeting, cost analysis, legal issues, research, and other production situations will also be examined.

Film/Video 32ab
Production II
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Film/Video 22 or one semester of Film 28ab with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is designed to provide the intermediate level production student with practical, hands-on experience in film/video production: planning, writing, shooting, and editing. Students will write and produce a variety of film/video-based personal and group projects.

Film/Video 34ab
Camera and Lighting
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Film/Video 20, Film/Video 22 or Film/Video 28ab with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This is an intermediate-level course in traditional and electronic cinematography that explores lighting design, composition, visual interpretation, and camera operation through screenings, lectures, and student projects.
Note: Letter grade or P/NP option.

Film/Video 36ab
Editing
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Film/Video 20 or Film/Video 22 or Film/Video 28ab with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This is an intermediate-level course that builds upon the picture and sound editing skills developed in the prerequisite production courses. Advanced editing concepts such as pace, rhythm, and tempo will be explored through screenings, lectures, and student-made projects. Special attention will be paid to the role of digital technology in film/video postproduction.
Note: Letter grade or P/NP option.

Film/Video 50
Special Topics in Television and Media Communication
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Film/Video more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Film/Video 52
Film, Culture, and Technology
3 units; 3 hours lecture
Recommended Preparation: Film/Video 1
Credit, degree applicable
Transfer CSU, UC
This course surveys technological innovations in film/video production, distribution, and exhibition and their impact on the entertainment industries and society as a whole. Special emphasis is placed on the economic, social, and political issues raised by technological innovation and the ways new digital and interactive media have both embraced and altered the "old" media. Screening of films that employ new technology or develop technology related themes are also included.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Film/Video 53
American Independent Cinema
3 units; 3 hours lecture
Recommended Preparation: Film/Video 1
Credit, degree applicable
Transfer CSU, UC
This course surveys the socio-economic, political, and artistic forces that led to the rise of American Independent Cinema. Emphasis will be placed on studying film makers, such as D.W. Griffith, Roger Corman, Robert Redford, David Lynch, Spike Lee, and Quentin Tarantino, who pioneered producing movies outside of the traditional Hollywood system.

Film/Video 54abc
Regional Cinemas
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course will survey major films and filmmakers from one or more regions, such as Italy or India, or from a geographic area such as Africa or Latin America. By analyzing representative films as unique cultural products, the student will be introduced to various methods of interpreting and evaluating a particular region's indigenous cinema within its socio-political context. Emphasis is placed on studying films and directors whose stylistic and thematic trends have been affected by significant cultural events. As the content changes each semester, this course is repeatable for credit.

Film/Video 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Film/Video field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Film/Video 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Film/Video with a minimum grade of B in each and acknowledgements by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Film/Video not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned film/video projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Fire and Emergency Technology

Fire and Emergency Technology 1
Fire Protection Organization
3 units; 3 hours lecture
Recommended Preparation: English 84 or eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course provides an introduction to fire protection; career opportunities in fire protection, and related fields; philosophy and history of fire protection; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; and introduction to fire strategy and tactics.

Fire and Emergency Technology 2
Fire Prevention Technology
3 units; 3 hours lecture
Recommended Preparation: Fire and Emergency Technology 1 or Fire and Emergency Technology 15 or equivalent; English 84 or eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course provides fundamental information regarding the history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use of fire codes; identification and correction of fire hazards; and the relationship of fire prevention with fire safety education and detection and suppression systems.

Fire and Emergency Technology – A.S. Degree and Certificates of Achievement

(Industry and Technology Division)

The fire and emergency technology program prepares students for entry-level employment and job upgrades in fire services and emergency medical fields. By completing the degree or certificate requirements, students will gain the ability to apply the principles of fire combat, fire protection organization, fire prevention, fire behavior, and building construction. Students will also gain proficiency in emergency medical assistance and in the handling of hazardous materials and emergency vehicles and apparatus. Competencies will be assessed regularly in compliance with the California State Firefighter I Standards and with the Los Angeles County certification process for emergency medical technicians and paramedics.

Note: Since employment as a fire fighter requires passing stringent physical and agility exams, persons considering such a career should ascertain that they meet those requirements.

El Camino College Major Requirements

Fire and Emergency Technology Option: Fire and Emergency Technology 1, 2, 5, 6, 9, 10, 20, 140, 141

Recommended Electives: Fire and Emergency Technology 4, 7, 8, 11,14, Physical Education 280

Total Units: 26

Paramedical Technician Option: In order to be eligible for the Paramedical Technician Option, the student must first complete the following requirements:

1. Provide verification of Emergency Medical Technician-1 (EMT-1) certification within the last 12 months;
2. Provide verification of at least 6 months experience as an EMT-1 in a pre-hospital setting;
3. Complete Fire Technology 15 or equivalent; and
4. Pass a medical examination according to the National Fire Protection Association (NFPA) Standard #1582;
5. Furnish proof of rubella immunity; Tuberculosis (TB) test; Hepatitis B vaccine. In addition to the program prerequisites, it is recommended that students be eligible, through assessment or coursework, for English 1A and Mathematics 70.

Required Courses (after meeting above requirement): Fire and Emergency Technology 130, 131, 132, 133, 134, 135, 136, 137, 138, 139

Recommended Electives: Anatomy 30 and any college chemistry course with a laboratory

Total Units: 33

(Continued on next page)

Fire and Emergency Technology 4
Fire Company Organization and Management

3 units; 3 hours lecture
Recommended Preparation: Fire and Emergency Technology 1 or Fire and Emergency Technology 15 or equivalent; English 84 or eligibility for English 1A
Credit, degree applicable
Transfer CSU

This course is designed to review fire department organization and offer instruction in the organization, management and supervision of fire companies. Areas of discussion include the relationship of the company officer to the organizational structure as well as responsibilities with regard to personnel supervision, evaluation, discipline and training, communication, fire apparatus and equipment, maintenance, fire prevention, incident response and command, strategy and tactics, and records and reports.

Fire and Emergency Technology 5
Fire Behavior and Combustion

3 units; 3 hours lecture
Recommended Preparation: Fire and Emergency Technology 1 or Fire and Emergency Technology 15 or equivalent; English 84 or eligibility for English 1A
Credit, degree applicable
Transfer CSU

This course discusses the theory and fundamentals of how and why fires start, spread, and are controlled, as well as an in-depth study of fire chemistry and physics, fire characteristics of materials, extinguishing agents and fire control techniques.

Fire and Emergency Technology 6
Building Construction for Fire Protection

3 units; 3 hours lecture
Recommended Preparation: Fire and Emergency Technology 1 or Fire and Emergency Technology 15 or equivalent; English 84 or eligibility for English 1A
Credit, degree applicable
Transfer CSU

This course is the study of the components of building construction that relate to fire safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at fires. The development and evolution of building and fire codes will be studied in relationship to past fires in residential, commercial, and industrial occupancies.

Fire and Emergency Technology 7
Fire Protection Engineering

3 units; 3 hours lecture
Recommended Preparation: Fire and Emergency Technology 1 or Fire and Emergency Technology 15 or equivalent; English 84 or eligibility for English 1A; Mathematics 40 or 41A
Credit, degree applicable
Transfer CSU

This course in fire protection engineering introduces hydraulics laws as applied to fire protection; the application of fire protection engineering; calculating fire protection demands in buildings, and the application of building components and approved fire protection systems.

Fire and Emergency Technology 8
Fire Service Hydraulics

3 units; 3 hours lecture
Recommended Preparation: Fire and Emergency Technology 1 or Fire and Emergency Technology 15 or equivalent; English 84 or eligibility for English 1A; Mathematics 40 or 41A
Credit, degree applicable
Transfer CSU

This course covers the theory and practical application of the laws of water hydraulics used in the fire service. Included in the course are calculations for friction loss and flow in fire hoses, fire engine pump operations, and the general study of fluids at rest and in motion.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Fire and Emergency Technology

(Continued from previous page)

Certificate of Achievement
A Certificate of Achievement will be granted upon completion of the courses in the Fire and Emergency Technology option, Fire Academy option, or Paramedical Technician option. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.
Fire and Emergency Technology Option: Fire and Emergency Technology 1, 2, 5, 6, 9, 10, 20, 140, 141
Total Units: 26
Fire Academy Option: Fire and Emergency Technology 1, 140, 141; Fire and Emergency Technology 15 or 115A and 115B; Physical Education 8; three units from: Fire and Emergency Technology 2, 5, 6, 7, 8, 9, 10, 11, 14, 19, 20
Total Units: 25.5
Paramedical Technician Option: In order to be eligible for the Paramedical Technician Option, the student must first complete the following requirements:

1. Provide verification of Emergency Medical Technician-1 (EMT-1) certification within the last 12 months;
2. Provide verification of at least 6 months experience as an EMT-1 in a pre-hospital setting;
3. Complete Fire Technology 15 or equivalent; and
4. Pass a medical examination according to the National Fire Prevention Association (NFPA) Standard #1582;
5. Furnish proof of rubella immunity; Tuberculosis (TB) test; Hepatitis B vaccine. In addition to the program prerequisites, it is recommended that students be eligible, through assessment or coursework, for English 1A and Mathematics 80.

Required Courses (after meeting above requirements): Fire and Emergency Technology 130, 131, 132, 133, 134, 135, 136, 137, 138, 139
Recommended Electives: Anatomy 30 and any college chemistry course with a laboratory
Total Units: 33

Preparation for the Transfer Major
For information of specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Fire and Emergency Technology 9
Apparatus and Equipment
3 units; 3 hours lecture
Recommended Preparation: Fire and Emergency Technology 1 or Fire and Emergency Technology 15 or equivalent; English 84 or eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course is a study of fire apparatus design and use, including mobile and fixed apparatus. It includes a review of construction specifications and performance capabilities as well as effective deployment, utilization, and performance of equipment under emergency conditions.

The hours per week of courses may be adjusted based on the length of the term.

Fire and Emergency Technology 10
Hazardous Materials
3 units; 3 hours lecture
Recommended Preparation: Fire and Emergency Technology 1 or Fire and Emergency Technology 15 or equivalent; Fire and Emergency Technology 14 or equivalent; English 84 or eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course is a study of fire fighting practices related to hazardous chemicals and their physical properties, uses in industry, and characteristics when involved in spills, fires, and accidents. It includes basic information regarding health effects and treatment as well as fire department protocols and responsibilities.

Fire and Emergency Technology 11
Arson Detection and Control
3 units; 3 hours lecture
Recommended Preparation: Fire and Emergency Technology 1 or Fire and Emergency Technology 15 or equivalent; English 84 or eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course is a study of prevention, detection, and control of arson fires. It includes arson motives, fire investigation, and lawful search, identification, collection, seizure, and preservation of evidence.

Fire and Emergency Technology 14
Applied Science for Fire Protection
3 units; 3 hours lecture
Recommended Preparation: Fire and Emergency Technology 1 or Fire and Emergency Technology 15 or equivalent; Technical Mathematics 1 or equivalent; English 84 or eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course is an introduction to matter, forces and motions, and the mechanics of liquids and gases, as they relate to fire technology.

Fire and Emergency Technology 15
Fire Academy
14.5 units; 20 hours lecture, 20 hours lab (10 weeks course)
10 hours lecture, 10 hours lab (20 weeks course)
Prerequisite:
1. Fire and Emergency Technology 1 with a minimum grade of C or equivalent;
2. Fire and Emergency Technology 140 and 141 (Emergency Medical Training) with a minimum grade of C in each or equivalent or possession of valid certification as an Emergency Medical Technician;
3. Physical Education 8
Enrollment Limitation:
1. Pass a physical examination according to the National Fire Protection Association (NFPA) Standard #1582;
2. Possess a valid California Driver's License
Credit, degree applicable
This class is designed for the student who wishes to prepare for entry level positions as a firefighter and become certified as a Fire Fighter 1 as specified by the California State Fire Marshal's Office. The student will participate in a 400-hour course of instruction emphasizing basic fire fighting skills such as methods of fire extinguishment, principles of ventilation, techniques of physical rescue, fire behavior, building construction, fire apparatus and fire equipment maintenance.
Note: Students must apply through the Industry and Technology Division Office. Once acceptance into the academy has been verified, college registration will take place at the first class meeting.

Fire and Emergency Technology 19
Fire Service Entrance Preparation
3 units; 3 hours lecture
Recommended Preparation: Fire and Emergency Technology 1; English A and Mathematics 40 or 41A
Credit, degree applicable
This course will explore all aspects of commonly used hiring procedures in the field of fire service. Fire service diagnostic tests will be used to identify any weakness in fire service entry-level skills. Students will research hiring practices, take practice written examinations, participate in mock oral board examinations, and receive instruction which will enhance their fire technology career opportunities.

Fire and Emergency Technology 20
Fire Protection Equipment and Systems
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84 or English A
Credit, degree applicable
Transfer CSU
This course addresses the features of design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers.

Fire and Emergency Technology 40A
Fire Command 1A
2 units; 20 hours lecture per week (2 weeks course)
Recommended Preparation: Fire and Emergency Technology 4 and 5 or equivalent
Credit, degree applicable
Transfer CSU
This course parallels the Command Principles for Company Officers course offered by the California Fire Service Training and Education System (CFSTES). The topics covered include the role of fire officers, fire behavior, fire ground resources, operations, and management procedures. The course applies to Fire Officer certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 40B
Fire Command 1B
2 units; 20 hours lecture per week (2 weeks course)
Recommended Preparation: Fire and Emergency Technology 40A
Credit, degree applicable
Transfer CSU
This course parallels the Hazardous Materials-Command Principles for Company Officers course offered by the California Fire Service Training and Education System (CFSTES). The topics covered include the Incident Command System (ICS), multi-casualty incidents, hazardous materials incidents, wildland fire incidents, environmental concerns, and legal issues. The course applies to Fire Officer certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 41A
Fire Command 2A
2 units; 20 hours lecture (2 weeks course)
Prerequisite: Fire and Emergency Technology 40A and 70 with a minimum grade of C in prerequisite
Credit, degree applicable
This course parallels the Command Tactics at Major Fires course offered by the California Fire Service Training and Education System (CFSTES). It is designed to prepare the officer to use management techniques and the Incident Command System when commanding multiple alarms or large suppression forces. This course applies to Chief Officer certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 41B
Fire Command 2B
2 units; 20 hours lecture (2 weeks course)
Recommended Preparation: eligibility for English 84 or English A; Fire and Emergency Technology 5, 40B, 41A and 70 or employment in the field
Credit, degree applicable
This course parallels the Management of Major Hazardous Materials Incidents course offered by the California Fire Service Training and Education System (CFSTES). It prepares fire officers to manage hazardous materials incidents. Areas of discussion include: information and data bases; organizations, agencies, and institutions involved in hazardous materials response and research; planning for hazardous materials problems; legislation, litigation and liabilities of hazardous material responses. This course applies to Chief Officer certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 50
Special Topics in Fire and Emergency Technology
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Fire and Emergency Technology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Fire and Emergency Technology 60A
Hazardous Materials
2 units; 40 hours lecture (one week course)
Recommended Preparation: 1 year of high school or college chemistry
Credit, degree applicable
This course is an introduction to the chemical and physical properties of various chemicals and the hazards associated with each. The course is designed to meet the needs of Hazardous Materials Response Team members and fire prevention personnel. Students successfully completing this course receive Hazardous Materials Technician 1A certification.

Fire and Emergency Technology 60B
Hazardous Materials, Applied Chemistry
2 units; 40 hours lecture (one week course)
Recommended Preparation: Fire and Emergency Technology 60A with a minimum grade of C
Credit, degree applicable
This course emphasizes the identification of hazardous materials for first responders and prevention officers. Topics covered in the course include: basic chemistry terminology, transportation regulations, toxicology of hazardous materials, detection and monitoring equipment and risk assessment. Students successfully completing this course receive Hazardous Materials Technician 1B certification.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

The hours per week of courses may be adjusted based on the length of the term.

Fire and Emergency Technology 60C
Hazardous Materials, Incident Organization
2 units; 40 hours lecture (one week course)
Recommended Preparation: Fire and Emergency Technology 60A with a minimum grade of C
Credit, degree applicable

This course emphasizes command concepts associated with hazardous materials response activities for first responders and prevention officers. Topics covered in the course include: methods of accessing information about hazardous materials, meteorological considerations influencing response activities, protective action consideration, respiratory equipment, chemical protective equipment, site safety and contingency planning concepts. Students successfully completing this course receive Hazardous Materials Technician 1C certification.

Fire and Emergency Technology 60D
Hazardous Materials, Tactical Field Operations
2 units; 40 hours lecture (one week course)
Recommended Preparation: Fire and Emergency Technology 60C with a minimum grade of C
Credit, degree applicable

This course emphasizes the techniques used by first responders and prevention officers to control leaks and spills from hazardous materials containers. Topics covered in the course include: care and proper use of chemical protective clothing, defensive, offensive and nonintervention control methods, decontamination procedures, preservation of evidence, reports and supporting documentation required at hazardous materials incidents. Student successfully completing the course receive Hazardous Materials Technician 1D certification.

Fire and Emergency Technology 60F
Special HAZMAT Mitigation Techniques
1 unit; 10 hours lecture, 30 hours lab (one week course)
Recommended Preparation: Fire and Emergency Technology 60D
Credit, degree applicable

This course provides an overview of equipment and methods used to mitigate a hazardous materials emergency. The student will be exposed to various types of monitoring equipment, chemical protective clothing, incident operations, railroad and highway tank car, and field scenarios. Students successfully completing this course will receive California State Fire Marshall Hazardous Materials Technician 1F certification.

Fire and Emergency Technology 60G
HAZMAT Field Operations
1 unit; 10 hours lecture, 30 hours lab (one week course)
Recommended Preparation: Fire and Emergency Technology 60F
Credit, degree applicable

This course emphasizes mitigation techniques of hazardous materials emergencies in field settings. The student will participate as a member of a hazardous materials response team and will don chemical protective clothing and enter simulated hazardous environments. The majority of the course is devoted to hands-on training with tools and equipment used in hazardous materials abatement procedures. Students successfully competing this course will receive California State Fire Marshall Hazardous Materials Technician 1G certification.

Fire and Emergency Technology 61
Hazardous Materials First-Responder/Scene Manager
2 units; 2 hours lecture
Recommended Preparation: Eligibility for English 84 and Mathematics 40 or 41B
Credit, degree applicable
Transfer CSU

This course parallels the First Responder Operational (FRO) course offered by the California Fire Service Training and Education System (CFSTES). The topics covered include hazardous material (HAZMAT) recognition, first responder roles and actions, protective equipment, HAZMAT authorities, and regulations. The course applies to fire service personnel certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 70
Basic Incident Command System - ICS 220
1 unit; 18 hours lecture (one week course)
Recommended Preparation: Fire and Emergency Technology 1 or concurrent enrollment or equivalent; eligibility for English 84 or English A
Credit, not degree applicable

This course parallels the Incident Command System 220 (ICS 220) course offered by the California Fire Service Training and Education Systems (CFSTES). It provides an introduction to the basic organizational and operational concepts of the Incident Command System (ICS), with emphasis on application to a wide variety of incidents. This course applies to Volunteer Fire Officer certification requirements established by the California State Board of Fire Services.

Note: Pass/no pass only.

Fire and Emergency Technology 80A
Fire Instructor 1A
2 units; 20 hours lecture per week (2 weeks course)
Recommended Preparation: Fire and Emergency Technology 1 or employment in the field
Credit, degree applicable
Transfer CSU

This course parallels Instructional Techniques Part 1 offered by the California Fire Service Training and Education System (CFSTES). It is designed to provide instruction in fire service training methods with emphasis on using the occupational analysis, identifying training needs, and training others to perform manipulative skills. The course applies to Fire Officer, Fire Instructor I, and Public Education Officer II certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 80B
Fire Instructor 1B
2 units; 20 hours lecture per week (2 weeks course)
Recommended Preparation: Fire and Emergency Technology 80A or equivalent
Credit, degree applicable
Transfer CSU

This course parallels Instructional Techniques Part 2 offered by the California Fire Service Training and Education System (CFSTES). The topics covered include preparing course outlines, establishing levels of instruction, constructing behavioral objectives and lesson plans, instructional aid development, and the fundamentals of testing and evaluation. The course applies to Fire Officer, Fire Instructor I, and Public Education Officer II certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 81A

Fire Instructor 2A

2 units; 20 hours lecture per week (2 weeks course)
Prerequisite: Fire and Emergency Technology 80A and 80B with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU

This course parallels the Instructional Techniques, Part 3, Techniques of Evaluation course, offered by the California Fire Service Training and Education System (CFSTES). It provides the fire service instructor and/or supervisor with the techniques of evaluation. Topics include construction of written (technical knowledge) and performance (manipulative skills) tests, as well as test planning, analysis, security, and evaluation of test results to determine instructor and student effectiveness and is an essential course for writing valid objective tests. This course applies to Fire Instructor II certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 81B

Fire Instructor 2B

2 units; 20 hours lecture (2 weeks course)
Prerequisite: Fire and Emergency Technology 80A and 80B with minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU

This course parallels the Instructional Techniques, Part 4, Group Discussion Techniques, course offered by the California Fire Service Training and Education System (CFSTES). Topics include conference leading and instructional planning, media resources, utilization and production, static displays, group discussions and problem solving techniques, brainstorming sessions, and group dynamics. This course applies to Fire Instructor II certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 81C

Fire Instructor 2C

2 units; 20 hours lecture (2 weeks course)
Prerequisite: Fire and Emergency Technology 80A and 80B with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU

This course parallels the Instructional Techniques, Part 5, Employing Visual Aids course offered by the California Fire Service Training and Education System (CFSTES). Topics of discussion include the principles of media in the instructional process, selection of audio/visual and instructional media, employment of basic and advanced forms of instructional media, use of computers in the instructional process, and individualized instruction programs, with emphasis on audio visual techniques. This course applies to Fire Instructor II certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 90A

Fire Investigation 1A

2 units; 20 hours lecture per week (2 weeks course)
Recommended Preparation: Fire and Emergency Technology 11 or equivalent or current employment in the field
Credit, degree applicable
Transfer CSU

This course parallels the Fire Cause and Origin Determination course offered by the California Fire Service Training and Education System (CFSTES). This is the first course in fire investigation and focuses on basic fire scene investigation, fire cause, fire scene indicators, fire scene records, and investigative agencies. It applies to Fire Officer and Fire Investigator I certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 90B

Fire Investigation 1B

2 units; 20 hours lecture per week (2 weeks course)
Recommended Preparation: Fire and Emergency Technology 90A
Credit, degree applicable
Transfer CSU

This course parallels the Techniques of Fire Investigation course offered by the California Fire Service Training and Education System (CFSTES). It is the second course in fire investigation and focuses on fire scene documentation, evidence collection and preservation, searches, interviewing techniques, applicable laws, and courtroom procedures. This course applies to Fire Investigator I certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 95abcd

Cooperative Work Experience Education

2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply

Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Fire and Emergency Technology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.

Note: The total units earned for CWEE may not exceed 16 units.

Fire and Emergency Technology 99abc

Independent Study

1-3 units; hours to be arranged
Enrollment Limitation: two courses in Fire and Emergency Technology with a minimum grade of B in each and acknowledgment by instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply

This course provides special advanced studies in a subject field of Fire and Emergency Technology not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Fire and Emergency Technology projects (60 hours per unit).

Note: Refer to page 11 of this Catalog for eligibility requirements.

Fire and Emergency Technology 100

Fire Management 1

2 units; 20 hours lecture per week
(2 weeks course)
Recommended Preparation: Fire and Emergency Technology 1 or current employment in the field and Fire and Emergency Technology 4
Credit, degree applicable
Transfer CSU

This course parallels the Management and Supervision for Company Officers course offered by the California Fire Service Training and Education System (CFSTES). The course is designed to prepare or enhance the first line supervisor's ability to supervise subordinates in a fire company and it introduces key management concepts and practices utilized in the California Fire Service. The course includes discussions about decision making, leadership styles, personnel evaluations, and counseling guidelines. This course applies to Fire Officer certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 101A

Fire Management 2A

2 units; 20 hours lecture per week
(2 weeks course)
Prerequisite: Fire and Emergency Technology 100 with a minimum grade of C
Credit, degree applicable

This course parallels the Fire Management, Organizational Development and Human Relations course offered by the California Fire Service Training and Education System (CFSTES). Participants are provided with information on how to make the transition from supervisor to manager and offered sound management principles in preparation for more intensified training in specific disciplines. Topics of discussion include internal and external influences, personality traits of firefighters, managing human relations, group dynamics, conflict resolution, and other problem solving techniques. This course applies to Chief Officer certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 110A

Fire Prevention 1A

2 units; 20 hours lecture per week
(2 weeks course)
Recommended Preparation: Fire and Emergency Technology 1 or equivalent or employment in the field
Credit, degree applicable
Transfer CSU

This course parallels the first course in the series of fire prevention courses offered by the California Fire Service Training and Education System (CFSTES). It provides a broad, technical overview of fire prevention codes and ordinances, inspection practices, key hazards, and extinguishing systems. This course meets National Fire Protection Association 1031, Fire Inspector Professional Qualifications Standards, and applies to Fire Officer, Fire Prevention Officer I, and Public Education Officer certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 110B

Fire Prevention 1B

2 units; 20 hours lecture per week
(2 weeks course)
Recommended Preparation: Fire and Emergency Technology 110A
Credit, degree applicable
Transfer CSU

This course parallels the second course in the series of fire prevention courses offered by the California Fire Service Training and Education System (CFSTES). It focuses on the codes and ordinances that pertain to fire prevention practices in California. The topics covered include combustible, flammable, and hazardous materials, building construction and occupancy, evacuation procedures, inspection reports, and processing plans. This course meets National Fire Protection Association 1031, Fire Inspector Professional Qualifications Standards, and applies to Fire Officer, Fire Prevention Officer I, and Public Education Officer certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 110C

Fire Prevention 1C

2 units; 20 hours lecture per week
(2 weeks course)
Recommended Preparation: Fire and Emergency Technology 110B
Credit, degree applicable
Transfer CSU

This course parallels the Flammable Liquids and Gases course offered by the California Fire Service Training and Education System (CFSTES). It is the third course in the series of fire prevention courses and focus on the storage, handling, and transportation of, as well as the special hazards associated with, flammable and combustible liquids and gases. This course meets National Fire Protection Association 1031, Fire Inspector Professional Qualifications Standards, and applies to Fire Prevention Officer I certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 111A

Fire Prevention 2A

2 units; 20 hours per week lecture
(2 weeks course)
Recommended Preparation: Fire and Emergency Technology 110A and 110B
Credit, degree applicable

This course parallels the Fire Protection Systems and Building Components course offered by the California Fire Service Training and Education System (CFSTES). It is the fourth course in the series of fire prevention courses and focuses on laws and regulations pertaining to fire protection systems, installations, and problems. Topics of discussion include smoke, heat, and fire detectors, fire alarm equipment, building components, assemblies and devices, fire doors, and basic hydraulic calculations for fire extinguishing systems. This course applies to Fire Prevention Officer II certification requirements established by the California State Board of Fire Services.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Fire and Emergency Technology 111B

Fire Prevention 2B

2 units; 20 hours per week lecture (2 weeks course)
Recommended Preparation: Fire and Emergency Technology 110A and 110B
Credit, degree applicable

This course parallels the Interpreting the California Code of Regulations (CCR), Titles 19 and 24, course offered by the California Fire Service Training and Education System (CFSTES). It is the fifth course in the series of fire prevention courses and provides the participants with in-depth information about the fire and life safety standards of buildings as they relate to Titles 19 and 24. Topics of discussion include types of construction, construction methods and materials, interior finishes, roof coverings, and occupancy. This course applies to Fire Prevention Officer II certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 111C

Fire Prevention 2C

2 units; 20 hours per week lecture (2 weeks course)
Recommended Preparation: Fire and Emergency Technology 110A, 110B, 110C
Credit, degree applicable

This course parallels the Special Hazard Occupancies course offered by the California Fire Service Training and Education System (CFSTES). It is the sixth course in the series of fire prevention courses and introduces the participants to some of the more unique or unusual fire prevention challenges. Topics of discussion include the role of regulatory agencies, high hazard industrial processes, special fire suppression systems, and industrial fire inspections. This course applies to Fire Prevention Officer II certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 112A

Fire Prevention 3A

2 units; 20 hours lecture per week (2 weeks course)
Recommended Preparation: Fire and Emergency Technology 110A, 110B, or equivalent; Technical Mathematics 1 or equivalent
Credit, degree applicable
Transfer CSU

This course parallels the Hydraulic Sprinkler Calculations course offered by the California Fire Service Training and Education System (CFSTES) and is the seventh course in a series of eight. This course provides an explanation and analysis of the functions and capabilities of a hydraulically calculated sprinkler system. This course applies to Fire Prevention Officer III certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 112B

Fire Prevention 3B

2 units; 20 hours lecture per week (2 weeks course)
Recommended Preparation: Fire and Emergency Technology 111B or equivalent
Credit, degree applicable
Transfer CSU

This course parallels the Plan Checking course offered by the California Fire Service Training and Education System (CFSTES) and is the eighth and last course in the Fire Prevention series. It provides hands-on training for building plan reviewers. Topics include: building codes, standards, and local amendments; site-plan review; building construction; building characteristics; fire protection equipment; multi-family occupancies; commercial buildings, care facilities; drinking and dining facilities; shopping malls and high rise buildings. This course applies to Fire Prevention Officer III certification requirements established by the California State Board of Fire Services.

Fire and Emergency Technology 113A

Fire Apparatus Driver/ Operator 1A

1.5 units; 30 hours lecture, 10 hours lab (one week course)
Recommended Preparation: Fire and Emergency Technology 1 and 9 or current employment in the field
Credit, degree applicable
Transfer CSU

This course provides the student with information on driver techniques for emergency vehicles and techniques of basic inspection maintenance of emergency vehicles, including actual exercises under simulated emergency conditions. This course applies to certification requirements for Driver/Operator as established by the California State Board of Fire Services.

Note: Pass/no pass only.

Fire and Emergency Technology 113B

Fire Apparatus Driver/ Operator 1B

1.5 units; 30 hours lecture, 10 hours lab (one week course)
Recommended Preparation: Fire and Emergency Technology 1 and 9 or current employment in the field
Credit, degree applicable
Transfer CSU

This course provides the student with information, theory, methods and techniques for operating fire service pumps. Topics covered include types of pumps, engine and pump gauges, maintenance, unsafe plumbing conditions, pressure relief devices, cooling systems, water supplies, drafting, field hydraulics, and pumping operations. This course applies to certification requirements for Driver/Operator as established by the California Board of Fire Services.

Note: Pass/no pass only.

Fire and Emergency Technology 115A

Fire Academy I

7.5 units; 6 hours lecture, 5 hours lab
Prerequisite:
1. Fire and Emergency Technology 1 with a minimum grade of C or equivalent;
2. Fire and Emergency Technology 140 and 141 (Emergency Medical Training) with a minimum grade of C in each or equivalent or possession of valid certification as an Emergency Medical Technician;
3. Physical Education 8 or pass the Candidate Physical Agility Test (CPAT) or Biddle Physical Agility Test
Enrollment Limitation:
1. Pass a physical examination according to the National Fire Protection Association (NFPA) Standard #1582;
2. Possess a valid California driver's license
Credit, degree applicable

This is the first course of a two-course sequence for the student who wishes to prepare for entry level positions as a firefighter and become certified as a Fire Fighter 1 as specified by the California State Fire Marshal's office. Emphasis is placed on physical fitness, fire company organization, fire protective equipment, fire behavior, basic fire fighting skills, building construction, fire apparatus, and fire equipment maintenance.

Note: The two-course sequence of Fire and Emergency Technology 115A and 115B is the same as Fire and Emergency Technology 15. Students must apply through the Compton Community Education Center Office of Vocational Technology. Once acceptance into the academy has been verified, college registration will take place at the first class meeting.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Fire and Emergency Technology 115B

Fire Academy II

7 units; 5 hours lecture, 6 hours lab
Prerequisite: Fire and Emergency Technology 115A with a minimum grade of C or equivalent
Enrollment Limitation:
1. Pass a physical examination according to the National
Fire Protection Association (NFPA) Standard #1582;
2. Possess a valid California driver's license
Credit, degree applicable

This is the second course of a two-course sequence for the student who wishes to prepare for entry level positions as a firefighter and become certified as a Fire Fighter 1 as specified by the California State Fire Marshal's office. Emphasis is placed on fire behavior, basic fire fighting skills, structure fires, ventilation, vehicle fires, wildland fires, search and rescue operations, rappelling, fire apparatus, and fire equipment operation.

Note: The two-course sequence of Fire and Emergency Technology 115A and 115B is the same as Fire and Emergency Technology 15. Students must apply through the Compton Community Education Center Office of Vocational Technology. Once acceptance into the academy has been verified, college registration will take place at the first class meeting.

Fire and Emergency Technology 128

Paramedic Preparation Course

3 units; 32 hours lecture (2 weeks course)
Recommended Preparation: six months experience as an Emergency Medical Technician (EMT) or equivalent
Credit, not degree applicable

This is a preparatory course designed to increase the success of candidates for paramedic training. The topics covered in the course include: medical terminology, anatomy, respiratory system, cardiovascular system, nervous system, pharmacology, electrophysiology and the pathophysiology of shock. Case studies and patient simulations will be utilized to reinforce learning.

Note: Letter grade or P/NP option.

Fire and Emergency Technology 130

Basic Prehospital Care Principles

2 units; 3 hours lecture (13 weeks course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course provides an introduction to medical terminology, along with a review of surface anatomy and physiology. The course presents an overview of the human nervous system, cardiovascular system, and respiratory system. Aseptic techniques will be described and demonstrated.

Fire and Emergency Technology 131

Field Assessing and Reporting

1.5 units; 2 hours lecture, 1 hour lab (13 weeks course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course covers assessment techniques used in a non-hospital/non-clinical setting. The necessity of obtaining complete and accurate vital signs is stressed. Trauma assessment is discussed and demonstrated.

Fire and Emergency Technology 132

Prehospital Care Pharmacology

1.5 units; 2 hours lecture, 1 hour lab (13 weeks course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course provides an introduction to the study of drugs and their ongoing nature and effect on living tissue. A study of the various drugs that are available to the prehospital care technician is presented along with medication administration techniques. An introduction to intravenous (IV) therapy and drug therapy is covered.

Fire and Emergency Technology 133

Basic and Advanced Life Support

6.5 units; 9 hours lecture (13 weeks course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course provides students with a review of cardiopulmonary resuscitation (CPR) techniques and sophisticated forms of airway management. The course presents an introduction and interpretation of electrocardiogram (EKG) rhythms with the use of an oscilloscope. Drugs used in cardiac arrest situations are discussed. Simulation exercises are conducted throughout the course.

Fire and Emergency Technology 134

Medical Emergencies

4 units; 6 hours lecture, 1 hour lab (13 weeks course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course covers a variety of medical emergencies that a paramedic is most likely to encounter. Topics presented include, but are not limited to communicable diseases, chest pain, drug abuse/poisonings, diabetes, neurological complications, and respiratory distress.

Fire and Emergency Technology 135

Traumatic Emergencies

2 units; 3 hours lecture (13 weeks course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course covers the causes and treatment of bodily injuries due to trauma. Discussion topics include maxillofacial and soft tissue injuries, burns, head, spinal, chest and abdominal wounds, emergency childbirth and multi-casualty incidents.

Fire and Emergency Technology 136

Special Patient Emergencies

2 units; 3 hours lecture (13 weeks course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course focuses on emergencies which involve unresponsive patients, pediatrics to geriatrics, and methods for resuscitating these victims. Also discussed are obstetrical and behavioral problems. Circumstances surrounding paramedic critical incident stress are presented.

Fire and Emergency Technology 137

Emergency Medical Services (EMS)/Legal Aspects/ Documentation

2 units; 3 hours lecture, 1 hour lab (13 weeks course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course covers the laws and legal authority which govern the scope of practice for the paramedic. Also presented are documentation techniques, paramedic report writing and paramedic skills competency testing.

Fire and Emergency Technology 138

Paramedic Clinical Internship

3 units; 40 hours lab per week (4 weeks course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course provides the student with an opportunity to apply knowledge and skills learned in the preceding courses to patient care. The emphasis of the course is to increase the student's assessment and diagnostic skills in a clinical setting.

Note: Pass/no pass only.

Fire and Emergency Technology 139

Paramedic Field Internship

8.5 units; 60 hours lab per week (8 weeks course)
Enrollment Limitation: admission to Paramedical Technician Program
Credit, degree applicable

This course provides an in-depth opportunity for the student to apply the skills and techniques that are necessary for a paramedic. The student will complete a field internship in a designated mobile intensive care unit under the supervision and evaluation of a certified paramedic or mobile intensive care nurse.

Note: Pass/no pass only.

Fire and Emergency Technology 140

Emergency Medical Technician

4 units; 4 hours lecture
Corequisite: enrollment in Fire and Emergency Technology 141
Credit, degree applicable
Transfer CSU

In this course, students will study the basic skills necessary for the assessment, rescue, immediate treatment, and transport of the urgently ill or injured persons. Course content emphasizes identifying and correcting life-threatening conditions, identifying appropriate rescue techniques, and developing a systematic approach for providing pre-hospital care.

Note: Students must show proof of current certification in Health Care Provider CPR or Professional Rescuer CPR from the American Heart Association or the American Red Cross at the first class meeting. Completion of this course and Fire and Emergency Technology 141, both with a grade of B or above, will make the student eligible to take the National Registry EMT exam.
Note: This course is repeatable.

Fire and Emergency Technology 141

Emergency Medical Technician Laboratory

1 unit; 3 hours lab
Corequisite: enrollment in Fire and Emergency Technology 140
Credit, degree applicable
Transfer CSU

In this course, students will develop and practice basic skills necessary for the assessment, rescue, immediate treatment, and transport of the urgently ill or injured persons. Course content emphasizes identifying and correcting life-threatening conditions, applying appropriate rescue techniques, and developing a systematic approach for providing pre-hospital care. Work outside of class includes ten hours of service in a prescribed hospital emergency room, and twelve hours of service on an active ambulance.

Note: Students must show proof of current certification in Health Care Provider CPR or Professional Rescuer CPR from the American Heart Association or American Red Cross at the first class meeting. Once enrolled, students must undergo a criminal background check to qualify for the required out-of-class activities. Completion of this course and Fire and Emergency Technology 140, both with a grade of B or above, will make the student eligible to take the National Registry EMT exam.
Note: This course is repeatable.

Fire and Emergency Technology 142abcd

Basic Emergency Medical Technician Recertification

1.5 units; 1.5 hours lecture
Prerequisite: Fire and Emergency Technology 140 and 141 with a minimum grade of C in prerequisite or equivalent course work taken within the past 3 years.
Credit, degree applicable
Transfer CSU

This is a refresher course for those in need of recertification as a basic Emergency Medical Technician. This course is designed to present the student with updated and new technology in the areas of prehospital care.

The hours per week of courses may be adjusted based on the length of the term.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Fire and Emergency Technology 143

Lifeguard Emergency Medical Technician Recertification

1.5 units; 32 hours lecture (one week course)
Enrollment Limitation: current employment as a Los Angeles County Lifeguard
Credit, not degree applicable

This is an in-service course for Los Angeles County Lifeguard personnel in need of recertification as a Basic Emergency Medical Technician. The course is designed to present the student with updated and new technology in the areas of emergency prehospital care in a marine environment.

Note: Pass/no pass only.
Note: This course is repeatable.

Fire and Emergency Technology 150

Firefighter In-Service Training

2 units; 1 hour lecture to be arranged, 4 hours lab to be arranged
Enrollment Limitation: current employment as a paid, volunteer or auxiliary firefighter
Credit, degree applicable
Transfer CSU

This course will acquaint fire service personnel with current changes in contemporary fire fighting techniques. Major topics include fire service appliances, fire chemistry, automatic fire extinguishers and agents. Additional topics include fire prevention and enforcement, arson investigation, public safety, hazardous materials control and enforcement, communication, and emergency medical techniques.

Note: This course is repeatable.

Fire and Emergency Technology 152

Flashover Survival Training

1 unit; 18 hours lecture (one week course)
Enrollment Limitation: current employment as a paid, volunteer or auxiliary firefighter
Credit, not degree applicable

This course is designed to provide students with the skills necessary to survive fire flashover and low pressure smoke explosion, also known as a backdraft. Students learn to recognize the incipient stages of fire development, survival techniques, and combat techniques that delay flashover. Each student will participate in live exercises simulating flashover in a Swede Survival Flashover Container.

Note: Pass/no pass only.
Note: This course is repeatable.

Fire and Emergency Technology 153

Rapid Intervention Crew Tactics

0.5 unit; 9 hours lecture, 9 hours lab (one week course)
Enrollment Limitation: current employment in the field as a firefighter, fire cadet, reserve firefighter, or auxiliary firefighter
Credit, not degree applicable

This course parallels the Rapid Intervention Crew (RIC) Tactics course offered by the California Fire Service Training and Education System (CFSTES). Instruction and simulated exercises in firefighter survival and methods of removing injured personnel from structures are presented.

Note: Pass/no pass only.

Fire and Emergency Technology 160abcd

Rescue Boat Operations

1 unit; 20 hours lecture, 20 hours lab (one week course)
Enrollment Limitation: acceptance in the Los Angeles County Fire Department Recurrent Lifeguard Program
Credit, not degree applicable

This is an introductory course for those who wish to acquire the specialized skills of operating rescue boats. Subjects covered include small boat handling, boat design, seamanship, water survival and rescue work.

Fire and Emergency Technology 161

Marine Safety and Ocean Lifeguard In-Service Training

2 units; 1 hour lecture to be arranged, 4 hours lab to be arranged
Enrollment Limitation: current employment as a Los Angeles County Lifeguard
Credit, not degree applicable

This course, designed for ocean lifeguard personnel, covers marine safety and rescue including current changes in the field. Major topics include: emergency organizational and command development, physical fitness, personal safety, marine fire suppression, use of specialized rescue equipment, swiftwater rescue, ordinance enforcement, specialized rescue techniques, communications, and emergency medical techniques.

Note: Pass/no pass only.
Note: This course is repeatable.

Fire and Emergency Technology 162

Rescue Diver In-Service Training

1 unit; 1 hour lecture to be arranged, 1 hour lab to be arranged
Enrollment Limitation: current employment as a Los Angeles County Lifeguard
Credit, not degree applicable

This course, designed for ocean lifeguard personnel, covers emergency rescue scuba diving including current changes in the field. Major topics include: dive physics, medical aspects of diving, and safety of the rescuer and team. The purpose, features, types and uses of dive equipment, underwater environment, dive skills and repetitive diving, underwater navigation, deep diving, and search and recovery salvage will be explored.

Note: Pass/no pass only.
Note: This course is repeatable.

Fire and Emergency Technology 163

Open Water Lifeguard Academy

5 units; 4 hours lecture, 3 hours lab
Enrollment Limitation: acceptance in the Los Angeles County Fire Department Recurrent Lifeguard Program
Credit, not degree applicable

This course provides instruction in surf and beach conditions, environmental hazards, lifesaving techniques, first aid, rescue equipment, and legal issues to prepare the student for employment as a recurrent lifeguard.

Note: Pass/no pass only.

Fire and Emergency Technology 164

Recurrent Lifeguard Certification

0.5 unit; 9 hours lecture (one week course)
Enrollment Limitation: acceptance in the Los Angels County Fire Department Recurrent Lifeguard Program
Credit, not degree applicable

This course is designed to provide certification training for the Los Angeles County Fire Department/Lifeguard Services Recurrent Lifeguards. Subjects covered include open water swimming, cardiopulmonary resuscitation (CPR), first aid, life saving equipment, and an update on new laws and regulations. This course meets the requirements for refresher training for Recurrent Lifeguards as per Title 22 of the California Health and Safety Code.

Note: Pass/no pass only.

Fire and Emergency Technology 165

Recurrent Marine Safety and Ocean Lifeguarding In-Service Training

1 unit; 1 hour lecture, 1 hour lab
Enrollment Limitation: acceptance in the Los Angeles County Fire Department Recurrent Lifeguard Program
Credit, not degree applicable

This course provides instruction in ocean lifeguard skills. Major topics include physical fitness, surf and beach conditions, environmental hazards, equipment, life saving techniques, first aid and rescuer safety.

Note: Pass/no pass only.
Note: This course is repeatable.

Fire and Emergency Technology 166abcd

Ocean Lifeguard Cadet Program

4.5 units; 4 hours lecture, 2.5 hours lab
Enrollment Limitation: two years experience in a Los Angeles County approved Junior Lifeguard Program or equivalent aquatic experience
Credit, not degree applicable

This introductory course prepares the student for employment as an ocean lifeguard. Major topics include cardiopulmonary resuscitation (CPR), first aid, rescue drills, surf and ocean swimming, rescue board proficiency, skin diving proficiency, communication, and environmental hazard identification.

Note: Pass/no pass only.

First Aid

First Aid 1

First Aid, Cardiopulmonary Resuscitation (CPR) and Basic Emergency Care

3 units; 3 hours lecture
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
Transfer CSU, UC

This course follows the American National Red Cross Program of First Aid and Basic Life Support (infant, child, adult and 2 person CPR). The course content includes an emphasis on prevention of injuries, safety education and skills necessary to sustain life in the event of trauma or sudden illness. Demonstration of skill proficiency and passing written exams with 80% or better will qualify students for certification in American Red Cross First Aid, Community CPR and Professional Rescuer CPR.

First Aid 4

Principles of Cardiopulmonary Resuscitation (CPR)

1 unit; 1 hour lecture, 0.5 hour lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU

This course provides students with concepts and skills needed to recognize and respond to life-threatening emergencies such as cardiac arrest, respiratory arrest, cerbrovascular accident, and foreign-body airway obstruction (choking). The rescue breathing, relief of foreign-body airway obstruction and CPR skills will be taught for victims of all ages including infants, children, and adults. Equipment includes barrier devices for ventilation, bag-masks, and use of an automated external defribulator (AED). Demonstration of skill proficiency and passing written exams with a minimum of 80% success will qualify students for certification by the American Heart Association.

French

French 1

Elementary French I

4 units; 5 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU, UC

This beginning course, taught within the context of French culture, introduces students to listening, speaking, reading and writing elementary French. Students develop pronunciation and speaking skills along with their understanding of spoken French. Computer programs and audio and video tapes are available to reinforce the language skills students acquire in the classroom.

Note: This course is comparable to one year of high school French.
Note: This course parallels French 120, USC.

The hours per week of courses may be adjusted based on the length of the term.

French 2

Elementary French II

4 units; 5 hours lecture
Prerequisite: French 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC

This course, taught within the context of French culture, is a continuation of the study of elementary French with an emphasis on listening, speaking, reading and writing. Students improve their pronunciation and speaking skills along with their understanding of spoken French. Computer programs and audio and video tapes are available to reinforce the language skills acquired in the classroom.

Note: The prerequisite for this course is comparable to one year of high school French.
Note: This course parallels French 150, USC.

French 3

Intermediate French I

4 units; 5 hours lecture
Prerequisite: French 2 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC

This intermediate course, taught within the context of French culture, emphasizes the study of the essentials of French grammar and the fundamentals of formal French composition. Through oral and written practice, students expand their French vocabulary and use of idiomatic expressions. Students read materials of representative French authors.

Note: The prerequisite for this course is comparable to two years of high school French.

French 4

Intermediate French II

4 units; 5 hours lecture
Prerequisite: French 3 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC

This course, taught within the context of French culture, is a continuation of the study of essential French grammar and formal composition. Through oral and written practice, students further expand their French vocabulary and use of idiomatic expressions. Students read materials of representative French authors and participate in daily conversations.

Note: The prerequisite for this course is comparable to three years of high school French.

French – A.A. Degree

(Humanities Division)

By completing the degree requirements, the student will acquire proficiency in speaking, reading, writing, and understanding French and will gain knowledge of French and Francophone cultures. The student will be able to communicate in French, write formal compositions, and read the texts of French and Francophone authors, all at the intermediate-mid level of competency. Competencies will be assessed throughout the language sequence with written and oral exams. This major provides career opportunities where knowledge of French is useful and prepares students for continued advanced learning of French.

The student who has completed two or more years of French in high school will have the opportunity to enroll with advanced standing and to complete semesters 5 and/or 6 at El Camino College. It is recommended that language majors enroll in conversation classes.

El Camino College Major Requirements
French 1, 2, 3, 4; French 21ab and French 22ab or one course from the following: Art 3, 4, English 15A, 15B, 35, 36, History 3, 4
Total Units: 19-20

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help your fulfill your associate degree requirements.

French 5
Advanced French I
3 units; 3 hours lecture
Prerequisite: French 4 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This advanced course, taught within the context of French culture, is a survey of literature written by French writers. Students read and summarize the works of representative French writers to acquire fluency in the language. Written French, with an emphasis on vocabulary building and functional grammar, is also included.

French 6
Advanced French II
3 units; 3 hours lecture
Prerequisite: French 4 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This advanced course, taught within the context of French culture, introduces students to French literary criticism. Students learn how to write critically about the works of representative French writers to acquire fluency in the language. Written French, with an emphasis on vocabulary building and functional grammar, is also included.

French 21ab
Beginning Conversational French
2 units; 2 hours lecture
Prerequisite: French 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
The course is designed to develop fluency in oral expression, increase oral comprehension, and improve pronunciation.

French 22ab
Intermediate Conversational French
2 units; 2 hours lecture
Prerequisite: French 2, French 21ab with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is designed for the intermediate student to develop fluency in oral expression, increase oral comprehension, and improve pronunciation. Conversational topics are based upon the daily experiences and cultural life of the ethnic areas involved with the language.

French 24
Introduction to French and Francophone Cultures
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course provides an introduction to the cultural aspects of the French language through a study of French and Francophone culture, geography, social institutions, literature, art, architecture, and music. Topics include a comparison of French and other Western languages and cultures.

French 50
Special Topics in French
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in French more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

French 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two French courses with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides special advanced studies in a subject field of French education not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned French education projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

General Science – A.S. Degree

(Natural Sciences Division)

The general science program provides students the opportunity to investigate diverse methods of inquiry by experiencing courses from a cross section of science disciplines. Students will develop critical thinking skills, learn to communicate effectively in writing, and acquire an understanding of major scientific concepts. Through course options, students will use mathematical concepts to solve problems and employ methods of scientific inquiry to understand the world around them. Completion of the degree requirements will prepare students with the skills and resources needed to facilitate academic and career decisions. Competencies will be assessed through regularly scheduled theory and laboratory examinations.

El Camino College Major Requirements
One of the following two-semester sequences: Biology 101-102, Chemistry 1A-1B, Chemistry 21A-21B, Physics 1A-1B, Physics 1A-1C, Physics 2A-2B, Physics 3A-3B; an additional 10-13 units from the following courses to reach a total of 20 units: at least one Physical Science course: Astronomy 20, 25, 12, Chemistry 1A, 1B, 4, 21A, 21B, Geology 1, 2, 3, 4, 15; at least one Biological Science course: Anatomy 32, Biology 8, 10, 11, 12, 16, 17, 18, 101, 102, Microbiology 33, Physiology 31

General Studies – A.A. Degree

(Behavioral and Social Sciences Division)

The Associate Degree in General Studies provides students with the opportunity to explore diverse methods of inquiry by selecting courses from a cross section of disciplines in an "area of emphasis." Students will develop critical thinking skills, learn to communicate effectively in writing, acquire an understanding of major concepts to solve problems, and employ methods of scientific inquiry to understand the world around them. Completion of the degree requirements will provide students with the skills and resources needed to make informed academic and career-related decisions.

Completion of the General Studies degree does not guarantee acceptance into a four-year university. Students planning to transfer to a CSU or UC should follow the CSU GE Breadth or IGETC pattern and complete transferable coursework that relates to the major at the CSU or UC campus. For further information and course selection, please consult with an academic counselor.

El Camino College Major Requirments
A. General Education: choose one of the following patterns
1. AA General Education Requirements (minimum of 24 units and the math competency)
2. CSU GE Breadth (39 units) - This general education pattern will fulfill lower-division general education requirements at the CSU campuses.
3. IGETC (34 units) - This general education pattern will fulfill lower- division requirements at the CSU, UC and some private colleges and universities.

B. Area of Emphasis:
1. A minimum of 18 units are required in one Area of Emphasis listed below.
2. A minimum of one course from two different disciplines is required in the emphasis.
3. The courses selected in the emphasis may also be used to fulfill general education areas on the Associate Degree, CSU GE Breadth, or IGETC.

C. Electives:
Elective units may be necessary to obtain the 60 degree applicable units that are required for the Associate Degree.

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General Studies

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1. Arts and Humanities: These courses emphasize the appreciation of arts and humanities through cultural activities and artistic expression of human beings. Students will evaluate and interpret the ways in which people through the ages in different cultures have responded to themselves and the world around them in artistic and cultural creation. Students interested in transferring to a four year university will have a basic foundation for further studies in areas such as arts, history, communications, English, foreign language, film studies, literature, history, journalism, or philosophy. This emphasis may be useful for students interested in possible career paths in fine arts, education, administration, or public service.

Select 18 units with at least one course in Arts and one course in Humanities.
Arts: Architecture 104; Art 1, 2, 3, 4, 5A, 5B, 6, 7, 9, 108, 150; Dance 1, 3, 5; Film/Video 1, 3; Music 1, 11, 12, 13, 15A, 15B; Theatre 1, 4, 8
Humanities: Sign Language/Interpreter Training 15, 16, 17A, 17B; English 1B, 1C, 10, 11, 12, 15A, 15B, 18, 20, 21, 22, 23, 24A, 24B, 25A, 26, 27, 28, 29, 30, 31, 32abc, 33, 34, 35, 36, 38, 39, 40A, 40B, 41A, 41B, 42, 43, 44, 46, 47; Film/Video 52, 53, 54abc; History 1A, 1B, 5A, 5B, 8, 9, 12A, 12B, 14A, 14B, 16A, 16B, 17, 18A, 18B, 19, 22, 25, 27, 30, 32, 37, 140, 141; History of Science 11; Humanities 1; Journalism 1, 12; Languages: Chinese 1, 2, 24; Italian 1, 2, 24; Japanese 1, 2, 3, 4, 25; French 1, 2, 3, 4, 5, 6, 24, 35; German 1, 2, 3, 4, 5, 24; Spanish 1, 2, 3, 4, 5, 6, 24, 52A, 52B; Philosophy 2, 3, 5, 7, 8, 10, 11, 23; Speech Communication 1, 3, 4, 5, 8, 9, 12, 14

2. Fine and Applied Arts: These courses will emphasize the nature of artistic activities and expression of art through analysis, examination, performance, and technical development. Students will incorporate techniques, engage in performance, and learn to value aesthetic understanding and integrate these concepts when constructing value judgments. Students transferring to a four-year university will have a basic foundation for further studies in areas such as architecture, art, digital media, creative writing, dance, film, music, performing arts, photography, studio art, or theatre arts. This emphasis may be useful for students interested in possible career paths in design, graphic arts, visual arts, photography, stage technician, musician, education, television, journalism, or acting.

Select 18 units from at least two disciplines.
Architecture, 104, 150A, 150B, 199ab; Art 1, 2, 3, 4, 5A, 5B, 6, 7, 9, 10ab, 11abcd, 17ab, 18abcd, 19ab, 22ab, 23abcd, 31abcd, 37ab, 41ab, 61ab, 81ab, 82abcd, 141abcd, 142abcd, 143abcd; Dance 1, 3, 5, 22ab, 23abcd, 32ab, 33abcd, 42ab, 43abcd; English 24A, 24B, 25A, 32abc, 38; Film/Video 1, 3, 4, 20, 21, 22, 32ab, 52, 53, 54abcd; Music 1, 2A, 2B, 3A, 3B, 3C, 7, 8A, 8B, 11, 12, 13, 15A, 15B, 18ab, 19abcd, 23abcd, 31A, 31B, 31C, 31D; Photography 1, 2, 51, 150; Theatre 1, 4, 8, 14A, 14B, 30, 84, 88, 90, 94

3. Communication Studies: These courses will emphasize the study of communication, culture, and the skills needed to communicate effectively in oral, written, or visual forms. Students transferring to a four year university will have a basic foundation for further studies in communication studies, media studies, journalism, English, or modern languages. This emphasis may be useful for students interested in possible career paths in broadcasting, public relations, advertising, journalism, interpreter, photography, technical writing, or radio and television.

Select 18 units from at least two disciplines.
Anthropology 4; Art 143abcd; English 1B, 1C, 10, 11, 12, 15A, 15B, 18, 20, 21, 22, 23, 24A, 24B, 25A, 26, 27, 28, 29, 30, 31, 32abc, 33, 34, 35, 36, 38, 39, 40A, 40B, 41A, 41B, 42, 43, 44, 46, 47; Film/Video 20, 22, 24, 28ab, 32ab, 52, 53, 54abcd; Journalism 1, 12; Library 1, 10; Photography 1, 11ab, 51; Languages: Sign Language/Interpreter Training 15, 16, 17A, 17B; Chinese 1, 2, 24; Italian 1, 2, 24; Japanese 1, 2, 3, 4, 25; French 1, 2, 3, 4, 5, 6, 24, 35; German 1, 2, 3, 4, 5, 24; Spanish 1, 2, 3, 4, 5, 6, 24, 52A, 52B; Speech Communication 1, 3, 4, 5, 8, 9, 12, 14

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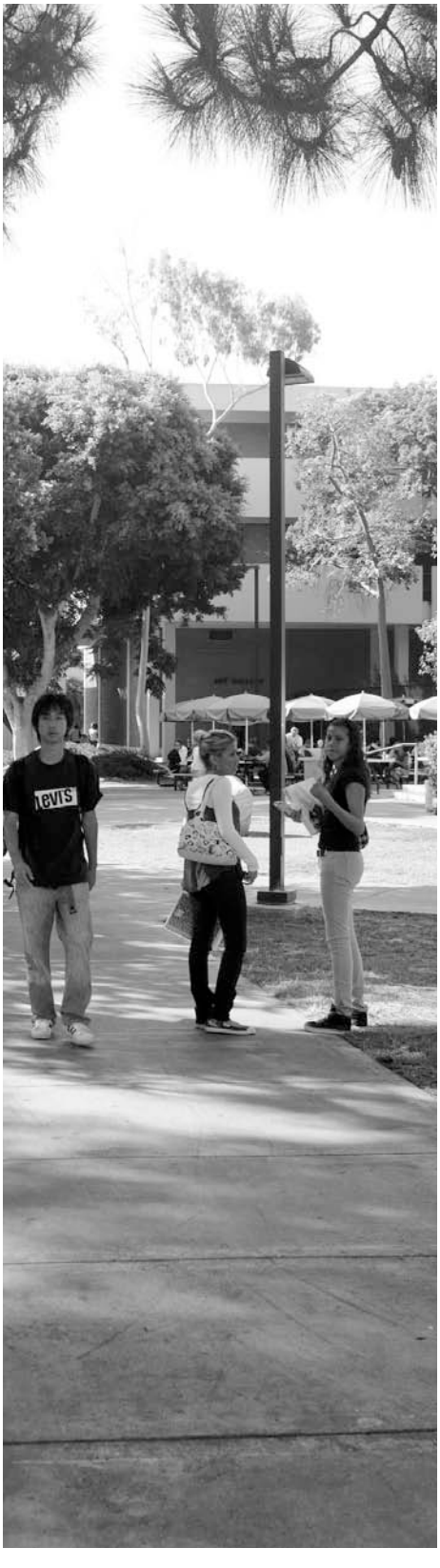

General Studies

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4. Social and Behavioral Sciences
These courses emphasize an appreciation and understanding of how members of diverse societies operate or have operated as individuals and social groups. Courses in the social and behavioral sciences will help students to develop an awareness of methods of inquiry and stimulate critical thinking about the ways in which people act and interact within social and cultural contexts. Students will study the perspectives, concepts, principles, theories, and methodologies of disciplines within social and behavioral sciences. Students transferring to a four year university will have a basic foundation for further studies in areas such as American studies, anthropology, criminal justice, child development, economics, geography, history, political science, psychology, or sociology. This emphasis may be useful for students interested in possible career paths in education, history, social work, public administration, public service agencies, library science, economics, or social policy.

Select 18 units from at least two disciplines.
Administration of Justice 100, 103, 107, 111, 115; American Studies 1, 3, 7; Anthropology 2, 3, 4, 6, 7, 8, 9, 10, 11; Child Development 3, 9; Economics 1, 2, 5; Education 201; Geography (excluding physical geography) 2, 5, 7; History 1A, 1B, 5A, 5B, 8, 9, 12A, 12B, 14A, 14B, 16A, 16B, 17, 18A, 18B, 19, 22, 25, 27, 30, 32, 37, 140, 141; History of Science 11; Political Science 1, 2, 3, 5, 6, 8, 10; Psychology 2, 3, 5, 7, 8, 9A, 9B, 10, 12, 15, 16, 21, 22 (same as Physical Education 275); Sociology 101, 102, 104, 107, 109, 110, 112, 115

5. Biological and Physical Sciences
These courses emphasize the physical universe, its life forms, and its natural phenomena. Courses in the sciences will help students develop an understanding of the scientific method and the relationship between science and other human activities. Students transferring to a four year university will a basic foundation for further studies in areas such as biology (biochemistry, biophysics, molecular and cell biology, marine biology, microbiology), chemistry, physical and earth sciences (astronomy, geology, physical geography, oceanography), or physics. This emphasis may be useful for students interested in possible career paths in life sciences, physiology, exercise science, physical sciences, or earth sciences.

Select 18 units with at least one course in Biological Science and one course from Physical Science.
Biological Sciences: Anatomy 30, 32; Anthropology 1, 5; Biology 8, 10, 11, 12, 15, 16, 17, 18, 101, 102, 103; Microbiology 33; Physiology 31
Physical Sciences: Astronomy 12, 20, 25; Chemistry 4, 1A, 1B, 7A, 7B, 20, 21A, 21B; Geography 1, 6, 9; Geology 1, 2, 3, 4, 6, 15, 30, 32, 34, 36; Oceanography 10; Physics 1A, 1B, 1C, 1D, 2A, 2B, 3A, 3B, 11, 12; Physical Science 25

Geography – A.S. Degree

(Natural Sciences Division)

The program is designed to provide students the opportunity to obtain a degree upon successful completion of the requirements of a geography transfer major. The geography student will apply fundamental concepts and principles of natural and cultural systems as studied in a spatial context. Competencies will be assessed by examining the student's ability to explain the relationships between people, places, and environments. Students will also map spatial distributions of natural and cultural features.

Preparations for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Geography

Geography 1
Physical Elements
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course describes and explains the physical elements of geography. The topics include maps, earth-sun relationships, elements of weather and climate, vegetation patterns, soil types, plate tectonics, volcanism, tectonic activity, and related landforms, weathering and mass wasting, and the landforms created by running water, glaciers, waves, and wind.

Geography 2
Cultural Geography
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course surveys the geographic distribution and interrelationships of cultural elements such as population, agriculture, industry, cities, religion, language, customs, and territorial organization.

Geography 5
World Regional Geography
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course surveys the major countries and regions of the world, examining their environments, people, cities, resources, history, economies, and special problems.

Geography 6
Physical Geography Laboratory
1 unit; 3 hours lab
Prerequisite: Geography 1 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU, UC
This course consists of laboratory exercises using the geographic grid and world time, earth-sun relationships, atmospheric processes and weather maps, climate classification, natural vegetation, and interpretation of land forms shown on topographic maps and aerial photographs.

Geography 7
Geography of California
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course is a systematic study of California's unique and diverse physical environments and associated land forms, climates, and ecological communities. An overview of human settlement patterns, economic activities, and cultural aspects, with an emphasis on physical environment-human occupancy relationships, will also be discussed.

Geography 8
Introduction to Geographic Information Systems
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: basic computer skills
Credit, degree applicable
Transfer CSU
This computer-based course provides an introduction to the fundamentals of automated mapping and Geographic Information Systems (GIS) software. Laboratory work includes experience in the use of map scales, working with spatial data, map features, map overlays, creation of charts and graphs, and the presentation of data in map layouts.

Geography 9
Weather and Climate
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the causes and regional distribution of the Earth's weather and climate. The content includes seasons, sea breezes, ozone depletion, global warming, hurricanes, tornadoes and thunderstorms. Use of weather instruments and weather data interpretation are also covered.

Geography 20abcd
Geography Field Studies
1 unit; 0.5 hour lecture, 1.5 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course focuses on the physical, cultural, urban, and economic elements of geographic regions. Field study is usually conducted over a four day period.
Note: Participants' fees required for camping and meals.

Geography 50
Special Topics in Geography
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Geography more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Geography 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Geography with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides the student an opportunity to explore research problems in Geography not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned laboratory work and/or research projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Geology

Geology 1
Physical Geology
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC

This course provides an introduction to the materials, structures, and processes that shape the earth. The course includes a survey of minerals and rocks, a study of plate tectonics and the forces that create volcanism and earthquakes, and a study of topographic features created by streams, landslides, ground water, glaciers, wind, and ocean waves.
Note: 4 units of laboratory science credit will be granted with concurrent or subsequent enrollment in a geology laboratory course.

Geology 2
History of Planet Earth
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course presents a study of the history of the Earth since the time of its formation to the present day. The course will integrate plate tectonics into a detailed investigation of the dynamics of the Earth's geologic forces and their effect on the atmospheric, oceanic and biologic realms. The effect of extraterrestrial events such as asteroid impacts that have shaped our habitable world will also be covered.
Note: 4 units of laboratory science credit will be granted with concurrent or subsequent enrollment in Geology 4 or 30 or 32.

Geology – A.S. Degree

(Natural Sciences Division)

The program is designed to provide students the opportunity to obtain a degree upon successful completion of the requirements of a geology transfer major. The student will acquire the ability to apply the theory of plate tectonics, knowledge of geologic hazards, and principles of geologic time to natural phenomena. Laboratories compliment the lecture material providing the student with a foundation in observational and interpretive techniques. Competencies are assessed by examining the student's ability to make careful observations of earth materials and processes, explain observations, predict future outcomes of earth processes, and successfully complete laboratory and field trip activities.

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Geology 3
Physical Geology Laboratory
1 unit; 3 hours lab
Prerequisite: Geology 1 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU, UC
This course is a laboratory study of geologic exercises and the use of topographic maps. Laboratory exercises will include identification of rocks and minerals, map exercises, structure problems, field studies and recognition of land forms created by various processes working on and in the earth.

Geology 4
History of Planet Earth Laboratory
1 unit; 3 hours lab
Prerequisite: Geology 2 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU, UC
This course utilizes laboratory exercises and field study to apply geologic principles in identification of sedimentary rocks and fossils and their use in interpreting earth history, age relationships and paleogeography of selected regions.

Geology 6
Earth Science in Education
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course is a broad-based introductory study of earth science for future kindergarten through 8th grade teachers and will include teaching techniques to engage students in science. The topics covered are part of the California science standards and are designed to introduce geology, oceanography, meteorology, and solar system astronomy. It includes study of earth materials, geologic history, ocean basins and coastlines, weather and climate, pollution and earth resources, planetary geology, and the scientific method. The laboratory component includes study of rocks, maps, scientific instruments, and earthquakes.
Note: Geology 6 is not designed for geology or earth science majors.

The hours per week of courses may be adjusted based on the length of the term.

Geology 15
Natural Disasters
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course presents a study of natural hazards such as earthquakes, volcanism, hurricanes, landslides and floods and how we can prepare for and possibly mitigate these phenomena in order to lessen their impact on society. In addition, this course will address global climate change and associated earth science processes, as well as the misuse and pollution of vital natural resources such as freshwater.

Geology 30
Geology Laboratory of Death Valley
1 unit; 3 hours lab to be arranged
Prerequisite: Geology 1 with a minimum grade of C or concurrent enrollment
Recommended Preparation: English 84
Credit, degree applicable
*Transfer CSU, UC**
This course is a field and laboratory study of the geologic history, rock types, and structural and geomorphic features of the Death Valley region, with special emphasis on seismic activity and desert processes.
**Note: Credit may be earned in Geology 30, Geology 32, Geology 34, and Geology 36; however, only one course will be UC transferable.*
Note: Some labs will be held in the field on weekends at arranged times.
Note: UC does not accept Geology 30, 32, 34, or 36 for the Physical Science laboratory requirement.

Geology 32
Geology Laboratory of Owens Valley and Sierra Nevada
1 unit; 3 hours lab to be arranged
Prerequisite: Geology 1 with a minimum grade of C or concurrent enrollment
Recommended Preparation: English 84
Credit, degree applicable
*Transfer CSU, UC**
This course is a field and laboratory study of the geologic history, rock types, and structural and geomorphic features of the Sierra Nevada and Owens Valley with special emphasis on volcanic and glacial processes.
**Note: Credit may be earned in Geology 30, Geology 32, Geology 34, and Geology 36; however, only one course will be UC transferable.*
Note: Some labs will be held in the field on weekends at arranged times.
Note: UC does not accept Geology 30, 32, 34, or 36 for the Physical Science laboratory requirement.

Geology 34
Geology Laboratory of Southeastern California
1 unit; 3 hours lab
Prerequisite: Geology 1 with a minimum grade of C or concurrent enrollment
Recommended Preparation: English 84
Credit, degree applicable
*Transfer CSU, UC**
This course is a field and laboratory study of the fault history, rock types, and structural and landform features of the deserts of Southeastern California with a focus on volcanic processes and desert landforms in the Mojave Desert region.
**Note: Credit may be earned in Geology 30, Geology 32, Geology 34, and Geology 36; however, only one course will be UC transferable.*
Note: Some labs will be held in the field on weekends at arranged times.
Note: UC does not accept Geology 30, 32, 34, or 36 for the Physical Science laboratory requirement.

Geology 36
Geology Laboratory of Coastal California
1 unit; 3 hours lab
Prerequisite: Geology 1 with a minimum grade of C or concurrent enrollment
Recommended Preparation: English 84
Credit, degree applicable
*Transfer CSU, UC**
This course is a field and laboratory study of the geologic history, rock types, structural and geomorphic features and mountain building processes along the central and southern California coast with emphasis on the geologic history of the Salinian Block, the subsequent impact of the San Andreas Fault, and coastal erosional processes.
**Note: Credit may be earned in Geology 30, Geology 32, Geology 34, and Geology 36; however, only one course will be UC transferable.*
Note: Some labs will be held in the field on weekends at arranged times.
Note: UC does not accept Geology 30, 32, 34, or 36 for the Physical Science laboratory requirement.

Geology 50
Special Topics in Geology
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Geology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Geology 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two earth sciences courses with a minimum grade of B in each and acknowledgment by the instructor with whom student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides the student an opportunity to explore research problems in Earth Sciences not covered in the regular departmental offerings through library, laboratory, or field projects. Regular conferences with the instructor are coordinated with assigned laboratory work and research projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

German

German 1
Elementary German I
4 units; 5 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU, UC
This beginning course, taught within the context of German culture, introduces students to listening, speaking, reading and writing elementary German. Students develop pronunciation and speaking skills along with their understanding of spoken German. Computer programs and audio and video tapes are available to reinforce the language skills students acquire in the classroom.
Note: The course is comparable to one year of high school German.

German 2
Elementary German II
4 units; 5 hours lecture
Prerequisite: German 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course, taught within the context of German culture, is a continuation of the study of elementary German with an emphasis on listening, speaking, reading and writing. Students improve their pronunciation and speaking skills along with their understanding of spoken German. Computer programs and audio and video tapes are available to reinforce the language skills acquired in the classroom.
Note: The prerequisite for this course is comparable to one year of high school German.

German 3
Intermediate German I
4 units; 5 hours lecture
Prerequisite: German 2 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This intermediate course, taught within the context of German culture, emphasizes the study of the essentials of German grammar and the fundamentals of formal German composition. Through oral and written practice, students expand their German vocabulary and use of idiomatic expressions. Students read materials of representative German authors.
Note: The prerequisite for this course is comparable to two years of high school German.

German 21ab
Beginning Conversational German
2 units; 2 hours lecture
Prerequisite: German 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course is designed to develop fluency in oral expression, increase oral comprehension, and improve pronunciation.

German 22ab
Intermediate Conversational German
2 units; 2 hours lecture
Prerequisite: German 2, 21ab with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is designed for the intermediate student to develop fluency in oral expression, increase oral comprehension, and improve pronunciation. Conversational topics are based upon the daily experiences and cultural life of the ethnic areas involved with the language.

German 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in German with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides special advanced studies in a subject field of German education not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with the assigned German education projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Global Studies

Global Studies 101
Introduction to Global Studies
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU, UC
This course offers a global introduction to world cultures. Students will be introduced to global cultures by examinining the theoretical approaches to understanding cultures around the world in relation to the United States. Emphasis is placed on analyzing the origins of different cultures, how and why they change, and their impact on individuals and societies
Note: This course is taught collaboratively with international partners and utilizes interactive Web-based video as well as chat and e-mail contact.

Health Education
See Contemporary Health

History

History 1A
United States History to 1877
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**
This course is a chronological survey of American historical development from the first Americans to 1877. Focus is placed on the understanding of American social, intellectual, political, economic, and diplomatic institutions. The expansion of the young nation within the scope of war and diplomacy and the influence of culture and ethnicity in American history will also be discussed.
**Note: The maximum UC credit allowed for students completing History 1A and 1B and History 16A and 16B and/or History 18A and 18B is one series.*

History – A.A. Degree

(Behavioral and Social Sciences Division)

The degree provides students with a foundation in the science of historical inquiry. After completing the program requirements, students will gain an understanding of the methodologies and schools of interpretation utilized by historians to study the past. Students will also demonstrate knowledge of the primary cultural, economic, intellectual, political, social, and diplomatic institutions of the United States and the world. Competencies will be assessed through the evaluation of student term papers and projects, essays, and regularly scheduled examinations.

El Camino College Major Requirements
History 1A, 1B, 140, 141; three courses from: History 5A, 5B, 8, 9, 12A, 12B, 14A, 14B, 16A, 16B, 17, 18A, 18B, 19, 22, 25, 27, 30, 37, 122, 152, 178; Political Science 1
Total Units: 21

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

History 1B
United States History from 1877 to the Present
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**
This course is a chronological survey of American historical development from 1877 to the present. Emphasis is placed on the understanding of American social, intellectual, political, economic, and diplomatic institutions. Special topical consideration will be given to the nation's culture and diversity. The emergence of the United States as a superpower is analyzed against the background of world history.
Note: History 1A is not a prerequisite.
**Note: The maximum UC credit allowed for students completing History 1A and 1B and History 16A and 16B and/or History 18A and 18B is one series.*

History 122
United States Social History: Cultural Pluralism in America
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course surveys the role and contributions of ethnic groups and racial minorities to United States history. Emphasis is placed on these groups' cultural interaction with the American way of life from colonial times to the present. Focus will also be given to the ways that race and ethnicity have shaped personal lives, communities, the nation, and international relations.

History 140
History of Early Civilizations
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the political, economic, social, and cultural development of World Civilizations from the origins of these complex cultures in the Neolithic era to the emergence of the West in the fifteenth century. Topics include the early civilizations of the Near East, Egypt, India, China, the Americas, Greece, and Rome.

History 141
History of Modern Civilizations
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the political, economic, social, and cultural development of world civilizations from the rise of the West in the mid-fifteenth century to the present day. Topics include the European voyages of exploration and expansion, Africa and the transatlantic slave trade, Protestant and Catholic Reformations, the Islamic empires, China and Japan in the age of global expansion, French and industrial revolutions, World War I and II, the Cold War, and globalization.
Note: History 140 is not a prerequisite.

History 152
History of Latin America through Independence
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course will survey the political, economic, social and cultural development of Latin America from the pre-European contact to the achievement of independence in the early 19th century. Topics covered in this course include the Native American world before European conquest, the socioeconomic, political and cultural consequences of contact between Native Americans, Europeans and Africans, the formation of the colonial order, and the move toward independence from Spanish and Portuguese colonial rule.

History 178
History of China
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course provides an introduction to the political, economic, social, and cultural development of China from earliest times to the present. Topics include Confucianism, Doaism, Buddhism, Western Imperialism, and the Republican and Communist Revolutions.

History 5A
History of Early Britain
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the political economic, social, and cultural development of Britain from earliest times to the 17th century. Topics include the emergence of common law and representative government from which Anglo-American civil liberties were derived. The course will also focus on the foundation of the British Empire as England began to evolve into a major power holding a central position in the world based upon maritime and commercial supremacy. Cultural development through the English Renaissance and Baroque periods will also be explored.

The hours per week of courses may be adjusted based on the length of the term.

History 5B
History of Modern Britain
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the political, social and cultural development of Great Britain from the 17th century to the present. Topics include the expansion and decline of the British empire, the evolution of democratic institutions and political thought, the Industrial Revolution, the World Wars, and Britain's relationship to the European community. Cultural development from the Neoclassical to the Victorian and contemporary periods also are examined.
Note: History 5A is not a prerequisite.

History 8
History of California
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the history of California with an emphasis on the geographical, political, socio-economic and cultural development of the state. The role of ethnic minorities and women from pre-European times to the present will also be discussed.

History 9
United States History: The American Indian Experience
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the history of the United States with an emphasis on native peoples of North America. Topics include the impact of European contact, trade, and colonization as well as the impact of United States political, economic, and social policies on Native Americans. Emphasis is placed on the attempts of American Indians to protect their sovereignty and revitalize their societies.
Note: This course meets the criteria of the CSU graduation requirement for United States History, Constitution, and American Ideals.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

History 12A
Introduction to African History, Prehistory to 1885
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of Africa from human evolution to the eve of colonial rule. Emphasis will be given to the political, economic, and social development of the African continent. Topics to be analyzed include African trade relations with Europe and the world, the influences of Christianity and Islam in Africa, the Transatlantic slave trade, African Diaspora, and early European incursions.

History 12B
Introduction to African History, 1885 to the Present
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the political, economic and social development of Africa from 1885 to the present. Special emphasis will be given to colonial conquest and African resistance to European rule, influence of Christian missionaries and Islam in Africa, the striving for independence and decolonization, and the struggle against apartheid in South Africa.

History 14A
History of Asian Civilizations
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the political, economic, social, and cultural development of Asian civilizations from earliest times to 1600. Emphasis will be placed on the experiences of India, China, Japan, Korea, and Southeast Asia and their interactions. Topics include the emergence of the earliest Asian civilizations, the development of major religious and philosophical traditions, the rise of regional and imperial states, and the impact of early contacts with the West.

History 14B
History of Asian Civilizations
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the political, economic, social, and cultural development of Asian civilizations from the 17th century to the present. Emphasis will be placed on the experiences of India, China, Japan, and Korea and their regional and global interactions. Topics include the impact of Western imperialism on these countries, the response to Western dominance and influence, and the emergence of these societies as modern nation-states.
Note: History 14A is not a prerequisite.

History 16A
The African American in the United States to 1877
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**
This course is a survey of the United States to 1877 with particular emphasis on the role of African Americans in shaping American society. The contributions of African Americans to the economic, political, social, and cultural development of the nation will be examined.
Note: This course meets the criteria of the CSU graduation requirement for United States History, Constitution, and American Ideals.
**Note: The maximum UC credit allowed for students completing History 16A and 16B and History 1A and 1B and/or History 18A and 18B is one series.*

History 16B
The African American in the United States from 1877 to the Present
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**
This course is a survey of the history of the United States from 1877 to the present with particular emphasis on the role of African Americans in shaping American society. The contributions of African Americans to the American society as a whole will also be examined.
Note: This course meets the criteria of the CSU graduation requirement for United States History, Constitution, and American Ideals.
**Note: The maximum UC credit allowed for students completing History 16A and 16B and History 1A and 1B and/or History 18A and 18B is one series.*

History 17
History of the Chicano in the United States
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course surveys United States history from the Chicano perspective and covers historical periods from the initial contact between European and indigenous North American societies through colonial, early national, and contemporary American historical periods. Emphasis is placed on this group's contributions to the development of the United States. Factors that have shaped the formation of Mexican American society within the context of United States history will also be analyzed.

History 18A
Women and American History from the Colonial Era to 1877
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**
This course is a chronological survey of the history of the United States from the colonial period through the era of reconstruction with special emphasis on the role of women in the shaping of American society. The contributions of women to the political, economic, and social development of the nation will be emphasized.
**Note: The maximum UC credit allowed for students completing History 18A and 18B and History 1A and 1B and/or History 16A and 16B is one series.*

History 18B
Women and American History from 1877 to the Present
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**
This course is a chronological survey of the history of the United States from 1877 to the present with special emphasis on the role of women in shaping American society. The contributions of women to the economic, political, and social development of the nation will be examined.
**Note: The maximum UC credit allowed for students completing History 18A and 18B and History 1A and 1B and/or History 16A and 16B is one series.*

History 19
A History of Mexico
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer, CSU, UC
This course surveys the political, social, cultural, and economic history of Mexico from Pre-Columbian times to the present. Discussion of major epochs of Mexican history will focus on the influence of various cultural groups in shaping modern Mexico.

History 22
Twentieth Century World History
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course examines the political, economic, and social development of the world from the beginnings of World War I to the present. Focus is placed on the factors that contributed to the outbreak of World War I and World War II and issues that remained unresolved by their treaties. New challenges introduced by these conflicts will be examined including the Cold War, decolonization and state building in Africa and Asia, the collapse of the Union of Soviet Socialist Republics (USSR), and the world's increasing interdependence.

History 25
History of Modern Germany, 1866 to the Present
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the political, economic, social, and cultural development of Germany from the time of unification in the mid-nineteenth century through the reunification of the post-Cold War period. This course will also consider the problems and historical patterns that characterize contemporary Germany.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

History 27
History of Los Angeles
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course surveys the political, social, and economic history of Los Angeles from its earliest settlement by Native Californians to the present. Topics will include environmental issues, urban development, race and ethnicity, the entertainment industry, and the media's portrayal of Los Angeles. Special emphasis is given to the expanding role of Los Angeles as a global city that serves as a destination for diverse immigrant populations and a center of international commerce.

History 30
History of Japan
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course surveys the history of Japan from earliest times to the present day. Focus will be placed on the origins and evolution of major cultural, social, economic, and political traditions and institutions. The influence of China and the West in the formation of Japanese values and politics will also be emphasized.

History 37
History of World Religions
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to the origins, essential doctrines, and historical development of the world's major religious traditions from prehistory to today and their impact on the societies in which they appear. Major religions examined include Judaism, Hinduism, Buddhism, Christianity, and Islam.

History 50
Special Topics in History
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in History more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

History 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in History with a minimum grade of B in each and acknowledgment by the instructor with whom student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides advanced studies in a subject field of History not covered in the regular departmental offerings. Regular conferences will be held with the instructor to discuss and coordinate the assigned projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

History of Science

History of Science 11
Introduction to the History of Western Science
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course the major ideas and organizing theories of the scientific revolutions in astronomy, physics, chemistry, biology, and geology are introduced. The professional and personal lives of the scientists responsible for each revolution are discussed. Scientists covered include Galileo Galilei, Isaac Newton, Albert Einstein, and Charles Darwin. A brief introduction to the methods, philosophy, and content of science is also included and an example of a contemporary scientific revolution is also discussed.
Note: This course is primarily for the non-science major. No mathematics or previous science background is required.

Home Economics
See Family and Consumer Studies

Home Health Aide
See Nursing

Horticulture
See Environmental Horticulture

Human Development

Human Development 5
Career Planning
1 unit; 1 hour lecture
Recommended Preparation: English 84 or ESL 52C and English A or English A-X
Credit, degree applicable
Transfer CSU
This course will provide students with career planning techniques. Emphasis will be placed on selecting a career-based on self-examination of interests, personality, skills, and values through assessment inventories, skill exercises, career research, and group activities.
Note: Pass/no passt only.

Human Development 8
Orientation to College and Educational Planning
1 unit; 1 hour lecture
Credit, degree applicable
Transfer CSU
This course provides students with the information, skills, and resources necessary for successful educational experiences. Students will become aware of their responsibilities as students in a diverse college setting, develop an understanding of their individual learning styles, create realistic and obtainable educational and career goals, develop skills in managing time to achieve goals, and learn how to create a support network using college resources and services.

Human Development 10
Strategies for Creating Success in College and in Life
3 units; 3 hours lecture
Recommended Preparation: English 84 or ESL 52C or English A or English A-X
Credit, degree applicable
Transfer CSU
This course provides an exploration of cognitive, psychological, social and physical factors influencing success in college and in life. Topics include personal responsibility, critical thinking, motivation, self-efficacy, self-awareness, lifelong learning, self-management, health and wellness, interpersonal communication in a diverse world, and educational planning.

Human Development 12
Strategies for Success in the Workplace
1 unit; 1 hour lecture
Credit, not degree applicable
This course will provide students with the knowledge, skills and personal/interpersonal awareness necessary for success in the workplace.

Human Development 15
Student Athlete Orientation to College and Educational Planning
2 units; 2 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course provides student athletes with the knowledge, skills, and self-awareness necessary for success in college. The student athlete becomes familiar with eligibility rules required to participate in intercollegiate athletics and transfer requirements to four-year institutions. Students are introduced to services and resources on campus, develop time management and study skills, and design a personalized educational plan.
Note: This course is open to all students.

Human Development 20
Navigating the Transfer Process
1 unit; 1 hour lecture
Credit, degree applicable
Transfer CSU
This course introduces students to the process of transferring to a university. Students will be provided with information necessary to evaluate educational and career goals, compare universities, and review university admissions and major preparation requirements. Emphasis will be placed on the development of educational plans, financial aid opportunities, and available programs and services at universities.
Note: Letter grade or P/NP option.

Human Development 50
Special Topics in Human Development
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Human Development more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

The hours per week of courses may be adjusted based on the length of the term.

Human Development 95ab
Cooperative Work Experience Education
2-3 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a positition related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Human Development field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Humanities

Humanities 1
An Introduction to the Humanities
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to the humanities through an historical, descriptive, interpretive, and critical study of film, drama, music, literature, painting, sculpture, and architecture.

Humanities 50
Special Topics in Humanities
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Humanities more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Industrial Arts
See Machine Tool Technology

Industrial Technology – A.S. Degree
(Industry and Technology Division)

The industrial technology program is designed to prepare students for transfer to programs in engineering technology or industrial technology. By completing the transfer requirements, students acquire a foundation in mathematics, chemistry, physics, computer-aided design and drafting, computer aided manufacturing, machine tool operation, and electronics. Competencies will be assessed regularly by student performance in the classroom and laboratory. Industrial technologists are employed in a wide range of careers including managers, management representatives, administrators, production supervisors, trainers, technical support specialists, and technology educators.

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Industry and Technology

Industry and Technology 15
Exploring Careers in Industry and Technology
3 units; 3 hours lecture
Credit, degree applicable
This course introduces the technology, skills, equipment and materials utilized in the following disciplines: Administration of Justice, Air Conditioning and Refrigeration, Architecture, Automotive Collision Repair/ Painting, Automotive Technology, Computer Aided Design/Drafting, Construction Technology, Cosmetology, Culinary Arts, Electronics, Environmental Technology, Fashion Design, Fire and Emergency Technology, Machine Tool Technology and Welding. Career options of each discipline studied will be presented.
Note: Pass/no pass only.

Interior Design

Interior Design 3
Interior Design Introduction to Macintosh
1 unit; 0.5 hour lecture, 1.5 hours lab
Credit, degree applicable
Transfer CSU
In this course, the student is introduced to the basic operation of the Macintosh computer. The software learned in this course will be reinforced in Interior Design project assignments.
Note: Same as Fashion 3, Family and Consumer Studies 3, Nutrition and Foods 3.

Interior Design 20
Textiles
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU,UC
This introductory course covers characteristics of textiles for Interior Design majors. Students are introduced to: various fibers, yarn types, fabrication, coloring, printing and finishing methods. Selection, use and care of textiles are emphasized.
Note: Same as Family and Consumer Studies 20 and Fashion 20.

Interior Design 45
Color Design
2 units; 1 hour lecture, 3 hours lab
Prerequisite: Interior Design 35 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU
This course covers the Munsell color system and its application to design concepts. Students will learn to utilize tools, materials, and equipment required to develop the technical skills needed for using color in interior design and related fields. Historical aspects and the psychological implication of color design will be explored. Color design problems applying color relativity and interaction theories will be studied.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Interior Design 50
Special Topics in Interior Design
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Interior Design more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Interior Design 120
Interior Design Careers
2 units; 2 hours lecture
Credit, degree applicable
Transfer CSU
Students will learn the profession of interior design, its related careers, the requirements, demands, opportunities and options for success at the various levels. The challenges, uniqueness and fulfillment of the industry will be presented to the student by visiting speakers and field trips to industry.

Interior Design 170
Space Planning for Interior Design
3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 1A and Mathematics 40
Credit, degree applicable
Transfer CSU
This course is a study of residential and commercial interior design space planning with emphasis on ergonomics and spatial relationships. Students will receive training in matrix programming and human interaction with interior spaces.

Interior Design 230
Professional Practice in Interior Design
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A and Mathematics 40
Credit, degree applicable
Transfer CSU
This course is a study of the client-designer-supplier relationships, such as the business and the legal aspects of interior design. The students will learn the business and professional management of an interior design practice including legal issues and project management.

Italian

Italian 1
Elementary Italian I
4 units; 5 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU, UC
This beginning course, taught within the context of Italian culture, introduces students to listening, speaking, reading and writing elementary Italian. Students develop pronunciation and speaking skills along with their understanding of spoken Italian. Computer programs and audio and video tapes are available to reinforce the language skills students acquire in the classroom.
Note: This course is comparable to one year of high school Italian.

Italian 2
Elementary Italian II
4 units; 5 hours lecture
Prerequisite: Italian 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course, taught within the context of Italian culture, is a continuation of the study of elementary Italian with an emphasis on listening, speaking, reading and writing. Students improve their pronunciation and speaking skills along with their understanding of spoken Italian. Computer programs and audio and video tapes are available to reinforce the language skills acquired in the classroom.
Note: The prerequisite for this course is comparable to one year of high school Italian.

Italian 21ab
Beginning Conversational Italian
2 units; 2 hours lecture
Prerequisite: Italian 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course is designed to develop fluency in oral expression, increase oral comprehension, and improve pronunciation of the Italian language. Conversational topics are based upon the daily experiences and cultural life of the ethnic areas involved with the Italian language.

Italian 22ab
Intermediate Conversational Italian
2 units; 2 hours lecture
Prerequisite: Italian 2 and 21ab with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is designed for the intermediate student to develop Italian fluency in oral expression, increase Italian oral comprehension, and improve Italian pronunciation. Conversational topics are based upon the daily experiences and cultural life of the ethnic areas involved with the Italian language.

Italian 24
Introduction to Italian Culture
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course provides an introduction to the cultural aspects of the Italian language through a study of geography, social institutions, literature, art, architecture, and music. Topics include a comparison of Italian and other Western languages and cultures. This course is taught in English.

Japanese

Japanese 1
Elementary Japanese I
4 units; 5 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU, UC
This beginning course, taught within the context of Japanese culture, introduces students to listening, speaking, reading and writing elementary Japanese. Students develop pronunciation and speaking skills along with their understanding of spoken Japanese. Computer programs and audio and video tapes are available to reinforce the language skills students acquire in the classroom.
Note: This course is comparable to one year of high school Japanese

The hours per week of courses may be adjusted based on the length of the term.

Japanese – A.A. Degree

(Humanities Division)

By completing the degree requirements, the student will acquire proficiency in speaking, reading, writing, and understanding Japanese and will gain knowledge of Japanese culture. The student will be able to communicate in Japanese, write formal compositions, and read the texts of Japanese authors, all at the intermediate-mid level of competency. Competencies will be assessed throughout the language sequence with written and oral exams. This major provides career opportunities where knowledge of Japanese is useful and prepares students for continued learning of Japanese.

The student who has completed two or more years of Japanese in high school will have the opportunity to enroll with advanced standing.

El Camino College Major Requirements
Japanese 1, 2, 3, 4 and 25; one course from: Japanese 21ab or 22ab; one course from: Anthropology 2, Art 5B, English 35, 36, History 14A, 14B, 30, Philosophy 7, Political Science 2, 10, Psychology 8, Sociology 104
Eleven of the required units must be completed at El Camino College.
Total Units: 24

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Japanese 2
Elementary Japanese II
4 units; 5 hours lecture
Prerequisite: Japanese 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course, taught within the context of Japanese culture, is a continuation of the study of elementary Japanese with an emphasis on listening, speaking, reading and writing. Students improve their pronunciation and speaking skills along with their understanding of spoken Japanese. Computer programs and audio and video tapes are available to reinforce the language skills acquired in the classroom.
Note: The prerequisite for this course is comparable to one year of high school Japanese.

Japanese 3
Intermediate Japanese I
4 units; 5 hours lecture
Prerequisite: Japanese 2 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This intermediate course, taught within the context of Japanese culture, emphasizes the study of the essentials of Japanese grammar and the fundamentals of formal Japanese composition. Through oral and written practice, students expand their Japanese vocabulary and use of idiomatic expressions. Students read materials drawn from daily life.
Note: The prerequisite for this course is comparable to two years of high school Japanese.

Japanese 4
Intermediate Japanese II
4 units; 5 hours lecture
Prerequisite: Japanese 3 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU , UC
This course, taught within the context of Japanese culture, is a continuation of the study of essential Japanese grammar and formal composition. Through oral and written practice, students further expand their Japanese vocabulary and use of idiomatic expressions. Students read materials drawn from daily life and participate in daily conversations.
Note: The prerequisite for this course is comparable to three years of high school Japanese.

Japanese 21ab
Beginning Conversational Japanese
2 units; 2 hours lecture
Prerequisite: Japanese 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course develops fluency in oral expression, increases oral comprehension, and improves pronunciation.

The hours per week of courses may be adjusted based on the length of the term.

Japanese 22ab
Intermediate Conversational Japanese
2 units; 2 hours lecture
Prerequisite: Japanese 2 and Japanese 21ab with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is designed for the intermediate student to develop expression, to increase oral comprehension, and to improve pronunciation. Conversational topics are based upon the Japanese culture.

Japanese 25
Cultural Aspects of the Japanese Language
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course provides a study of the cultural aspects of the Japanese language, including the origin of the Japanese people and their language, art, religion, philosophy, and geography. The anthropological and sociological characteristics relating to the language and a comparison of Japanese and Western languages and cultures are also covered.
Note: Course is conducted in English.

Japanese 50
Special Topics in Japanese
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Japanese more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Japanese 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Japanese with minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides special advanced studies in a subject field of Japanese education not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Japanese projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Journalism

Journalism 1
News Writing and Reporting
3 units; 3 hours lecture
Prerequisite: credit in English A and English 84 or qualification by testing (English Placement Test) and assessment
Credit, degree applicable
Transfer CSU, UC
This course provides instruction in writing for the media from print to broadcast journalism. Format and style for various story types will be introduced, including news, features and sports. Emphasis will be placed on methods of gathering information, including the use of electronic media, covering the community and understanding media ethics.

Journalism 2
Public Relations Methods
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course provides instruction in the practice of public relations, including writing news releases and broadcast announcements, creating newsletters, placing photos and advertising, and developing public relations campaigns. Emphasis is on journalistic style and the Analysis of case studies.

Journalism 3ab
Advanced Reporting and News Editing
3 units; 3 hours lecture
Prerequisite: Journalism 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course will provide students with instruction in interpretive, in-depth and opinion writing and will incorporate the study of editing principles, style and design to conform with professional models. Problems of law and libel will be discussed. Students will also be given hands-on instruction in electronic journalism as well as in computer typesetting and graphics.

Journalism – A.A. Degree and Certificate of Achievement

(Humanities Division)

By completing the degree or certificate requirements, the student will acquire proficiency in traditional and electronic news gathering techniques and in analyzing and evaluating information. The student will be able to write a variety of publishable stories for electronic and print journalism and to apply principles of editing and publication design. Degree and certificate competencies will be assessed regularly by performance in the college newspaper's print and Web editions and its magazine, as well as by participation in state and national competitions. The major prepares students for career opportunities in electronic journalism and in newspaper, magazine, advertising, public relations, and radio/television work.

El Camino College Major Requirements
Journalism 1, 3ab (one semester), 5, 11abcd (two semesters), 12, Photography 51; two courses from: Journalism 2, 4, 7ab (or Photography 11ab), 9abcd, 11abcd, 96abcd, Economics 1, Political Science 5, 8, Speech Communication 5
Total Units: 24-27

Certificate of Achievement
A Certificate of Achievement will be granted upon completion of the courses listed below. At least 15 units must be completed at El Camino College.
Journalism 1, Journalism 2 or 5, Journalism 3ab (one semester), Journalism 7ab or Photography 11ab (one semester), Journalism 9abcd (one semester), Journalism 11abcd (two semesters), Journalism 12, English 1B or 1C; three courses from: Journalism 3ab, 4, 7ab or Photography 11ab, 9abcd, 11abcd, 96abcd
Total Units: 34-38

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Journalism 4
Feature Writing
2 units; 2 hours lecture
Prerequisite: eligibility for English 1A or equivalent
Credit, degree applicable
Transfer CSU
Feature writing prepares the journalist for the study, planning and writing of feature articles for publication. The student will survey and evaluate market trends in popular, trade, specialized and other types of publications, and then submit articles to those markets. The course will also feature guest speakers in the field of magazine publication.

Journalism 5
Broadcast News Writing
3 units; 3 hours lecture
Recommended Preparation: Journalism 1 or English 1A
Credit, degree applicable
Transfer CSU
This course provides instruction in news writing and reporting for radio and television outlets. Principles and techniques of broadcast news, including interviewing, writing, and presenting materials for radio and television stations, are covered. Emphasis is placed on methods of gathering information, preparing broadcast news scripts, and discussing the ethics and laws that govern broadcasters.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

The hours per week of courses may be adjusted based on the length of the term.

Journalism 6
Basic Photojournalism
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable;
Transfer CSU

This course provides instruction in the elementary aspects of photography with emphasis on principles and techniques of photojournalism, including camera use, news photography, feature photography, sports photography, photo essays, and caption writing. Emphasis is placed on preparing students to take photographs for campus student publications using digital cameras and computer software such as Photoshop.

Journalism 7ab
Advanced Photojournalism
2 units; 1 hour lecture, 3 hours lab
Prerequisite: Photography 51 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU

This course provides practical experience in taking and processing sports, news and feature photographs to be utilized by the campus newspaper and magazine. Experience is also gained in news photo editing, picture-page layout, digital photography and photo scanning.

Note: This course may be taken two semesters for either Journalism or Photography credit.
Note: Journalism 7ab is the same as Photography 11ab.

Journalism 9abcd
Magazine Editing and Production
2 units; 1 hour lecture, 3 hours lab per week to be arranged
Prerequisite: Journalism 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU

This course is designed to provide advanced journalism students with experience in writing, editing and graphic design for small publications, including production of Warrior Life, a general interest campus magazine.

Journalism 11abcd
Newspaper Publication
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Journalism 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU

Newspaper Publication provides instruction and laboratory experience in the assembly, page makeup, and publication of the college newspaper. Students also receive detailed analysis and critiques of the news stories written and published as well as on the overall presentation of the college newspaper.

Journalism 12
Mass Media and Society
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**

This course examines the past and current influences on American society of books, newspapers, magazines, movies, radio, television, recordings, and the World Wide Web. With a focus on critical thinking skills, students gain experience in reading and writing persuasive and argumentative essays about problems facing the mass media. Students also learn the history of the eight mass media as well as analyze and evaluate the functions, the responsibilities, the regulations, and the ethics involved in the mass media industry.

Note: The maximum UC credit allowed for students completing Journalism 12 and Speech Communication 5 is one course.

Journalism 14abcd
Multimedia Journalism
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Journalism 1 with a minimum grade of C
Credit, degree applicable;
Transfer CSU

This course provides training in multimedia journalism with an emphasis on the principles and techniques of multimedia reporting, including preparing news for the World Wide Web using text, audio, video and photographs. Students create multimedia news projects for publications on the Web, using digital cameras, digital recorders, digital camcorders and computer software.

Journalism 50
Special Topics in Journalism
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course

This course is designed to explore topics in Journalism more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Journalism 96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply

Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Journalism field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.

Note: The total units earned for CWEE may not exceed 16 units.

Journalism 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Journalism with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply

This course provides special advanced studies in journalism not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Journalism projects.

Note: Refer to page 11 of this Catalog for eligibility requirements.

Laboratory Technician (Medical) – A.S. Degree

[Natural Sciences Division]

This degree is designed for students planning to transfer and pursue a California clinical laboratory technologist's license. Upon successful completion of the program requirements, the student will have the ability to apply the fundamental principles of atomic and molecular structure, perform qualitative analysis of common metallic and non-metallic ions, utilize applied physics and particle physics, solve problems related to the differentiation and integration of single variable functions, and will acquire a foundation in the physiological and functional aspects of the human body systems. Students will become familiar with the techniques and procedures related to microscopy for determining cell morphology and tissue types. Competencies will be assessed through regularly scheduled theory and laboratory examinations.

El Camino College Major Requirements
Biology 101 and 102 or Biology 102 and Physiology 31; Chemistry 1A and 1B; Mathematics 160 or 190; Microbiology 33; Physics 2A and 2B or Physics 3A and 3B
Total Units: 36-40

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Law

See Paralegal Studies for major and certificate programs.

Law 4
Legal Environment of Business
4 units; 4 hours lecture
Recommended Preparation: English 84
Credit, degree applicable
*Transfer CSU**
This course is an introduction to a legal environment in which a business firm operates. Topics include an introduction to the American legal systems, contracts, torts, product liability, forms of business organization, trade regulation, labor law, environmental law, and international business law.
**Note: There may be CSU course limitations for students completing Law 4 and Law 5. Check with the transfer school for transfer status of this course.*

The hours per week of courses may be adjusted based on the length of the term.

Law 5
Contracts, Sales and Commercial Paper
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
*Transfer CSU**
This course examines court systems, statutory laws, legal and equitable remedies, contract agreements as foundations for other commercial laws, law of sales and purchases of goods, commercial paper including promissory notes, drafts, checks and certificates of deposits.
**Note: There may be CSU course limitations for students completing Law 5 and Law 4. Check with the transfer school for transfer status of this course.*

Law 6
Agency, Corporations and Partnerships
3 units; 3 hours lecture
Prerequisite: Law 5 with a minimum grade of C
Credit, degree applicable
Transfer CSU
The focus of this course is on business organizations and employer/employee relationships and liabilities: agency, corporations, partnerships, Limited Liability Company (LLC), and Limited Liability Partnerships (LLP). Business torts and government regulations of business are covered.

Law 11
Introduction to Legal Research
3 units; 3 hours lecture
Prerequisite: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course will give the legal assistant a general introduction into the basic legal research tools, including legal citation, legal analysis, and writing of legal memorandum and legal documents. The class includes a component of training in on-line computer research.

Law 12
Probate Procedures
3 units; 3 hours lecture
Prerequisite: Law 11 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course is an overview of the procedural structure of basic practice. The course is designed to cover every aspect of probate procedures. All necessary forms and procedures will be examined and explained from the client interview to the closing of the estate. This course will cover all aspects of practice concerning conservatorship, guardianships of incompetents and guardianships of minors.

Law 13
Family Law
3 units; 3 hours lecture
Prerequisite: Law 11 with a minimum grade of C
Credit, degree applicable
Transfer CSU
The course concentrates on the legally recognized relationships of men and women. Special emphasis is given to the dissolution of a marriage. The student will acquire basic information on the legal theories behind the dissolution and the public policy supporting those theories. The student will prepare the proper forms for the dissolution proceedings. This course includes requirements of a valid marriage, a Judgment of Nullity, legal separation, dissolution of marriage proceedings, and Order to Show Cause. This course also covers the concepts of separate and community property and division upon dissolution. Other aspects of family law including children's rights, adoption and guardianships are discussed.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Law 14
Tort Law
3 units; 3 hours lecture
Prerequisite: Law 11 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course includes the study of intentional wrongs, inadvertent wrongs, and that type of conduct for which the law imposes absolute liability. Special emphasis is given to legal theories such as the concept of causation, standard of care, reasonable person, duty, and defenses to liability. There is also coverage of wrongs which produce intangible harm such as defamation, invasion of privacy, misrepresentation, and misuse of legal process.

Law 15
Civil and Criminal Evidence
3 units; 3 hours lecture
Prerequisite: Law 11 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course examines the rules of civil and criminal evidence. It emphasizes how to develop and utilize evidence and how to summarize documents and other evidence in an ordered and systematic matter so that the evidence will be readily available for use by the attorney in preparation for and use in trial.
Note: This course is offered fall semesters only.

Law 16
Civil Procedure
3 units; 3 hours lecture
Prerequisite: Law 11 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU
Civil Procedure will deal with the role of the legal assistant in the filing of a civil law suit. The subjects include determination of the proper forum and sections from the Code of Civil Procedure. General principles of pleading, joinder, discovery and adjudication without trial are included.

Law 17
Legal Research and Writing
3 units; 3 hours lecture
Prerequisite: Law 11 with a minimum grade of C
Credit, degree applicable
Transfer CSU
The focus of this course is on the techniques of effective legal writing.

Law 18
Wills, Trusts and Estate Planning
3 units; 3 hours lecture
Prerequisite: Law 11 with a minimum grade of C or equivalent experience
Credit, degree applicable
Transfer CSU
This course examines basic concepts and proper use of wills and trusts in estate planning. Topics include: taxes through estate planning, probate, methods of holding title to property, tax effects of gifts, gifts to minors, laws of intestacy, state and federal tax requirements during life and upon death, guardianships, and conservatorship.

Law 19
Law and Computers
2 units; 1 hour lecture, 2 hours lab
Prerequisite: Law 11 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU
This course is an introduction to the use of computers in the law office and the utilization of legal specific software for forms and document preparation. Emphasis is placed on how to automate document production and litigation support systems. Time and billing software is also utilized. Introduction to legal and general electronic information databases are covered. Current legal research software, such as Lexis, and sources on the Internet are also included in the course.

Law 20
Paralegal Seminar
3 units; 3 hours lecture
Prerequisite: Law 17 with a minimum grace of C or concurrent enrollment
Credit, degree applicable
Transfer CSU
This course focuses on ethics, advanced paralegal communication skills, law office management, problem solving, and analysis skills. It also includes a component on employment, networking and job search. This course is designed to be taken at the end of the paralegal student's course of study.

Law 31
E-Commerce Law
3 units; 3 hours lecture
Recommended Preparation: Law 5
Credit, degree applicable
Transfer CSU
This course covers the legal aspects of business transactions on-line. Topics covered will include on-line contracts, e-crimes, privacy, intellectual property, e-commerce taxation, and e-payment systems.
Note: Letter grade or P/NP option.

Law 50
Special Topics in Law
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Law more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Law 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Law field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Legal Assistant
See Paralegal Studies

Liberal Studies (Elementary Teaching) – A.A. Degree

(Behavioral and Social Sciences Division)

This degree is designed for students who wish to earn a multiple-subject teaching credential authorizing them to teach in grades K-5. Students will study a broad range of subjects to prepare them for teaching, including English, mathematics, science, social science, visual and preforming arts, and human development. Competencies will be assessed regularly through projects, examinations, laboratory experiments, and presentations. Program assessment will be conducted by tracking student placement in teacher preparation programs at the university level.

General Information
Majoring in Liberal Studies will afford students the opportunity to complete the first two years of lower division coursework for their intended transfer institution and, depending upon the program selected, up to 45 hours of the required fieldwork for the credential.

El Camino College Major Requirements
Transfer Degree Option: Students must complete the requirements listed on the guide sheet for a transfer institution.
Teacher Preparation Option: English 1A, Speech Communication 1 or English 1C; History 1A, or 1B; Political Science 1; Geography 5 or Child Development 103 or History 140; one course from: Biolog 10, Geology 6, Physical Science 25; one course from: Art 1, Dance 1, English 15A, 15B, 35, 36, 40A, 40B, 42, 43, 44, Music 11, 12, Theatre 1; one course from: Mathematics 73, 80, 110, 111, 115, 120, 130, 150, 170
Total Units: 25-28

For information on specific university requirements and teaching careers, please contact the Teacher Education Preparation (TEP) Program at 310.660.3573.

Library Information Science

Library Information Science 1
Introduction to Library Information Science
1 unit; 1 hour lecture
Credit, degree applicable
Transfer CSU, UC
This course acquaints students with the organization of libraries and their resources, enabling them to develop strategies for library research. Students will learn how to locate and evaluate the traditional and electronic types of library materials; how to document resources; and how to prepare a bibliography. Students will also acquire proficiency in the use of informational technology in order to understand the full potential of library resources.

Library Information Science 10
Library Research Using the Internet
1 unit; 1 hour lecture
Credit, degree applicable
Transfer CSU, UC
This course will familiarize students with library research as it relates to information access, search strategy development, and search engine capabilities of the Internet. Other related topics include information competency and the evaluation, validation, and citation of Internet sources.
Note: Letter grade or P/NP option.

Library Science

El Camino College does not offer a curriculum in library training. The student who plans to enter a library school should follow the lower division requirements of the school to which he or she plans to transfer and acquire a background in social sciences and the language arts. For specific requirements, make an appointment to see the Humanities counselor.

Machine Tool Technology

Machine Tool Technology 2
Manufacturing Print Reading
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU
In this course, students are introduced to working drawings, blueprints, and engineering specifications used in manufacturing industries. Representative drawings from simple production to complex assembly will be used to demonstrate concepts and for practice in interpreting the symbols and notations. Geometric Dimensioning and Tolerancing (GD&T) in accordance with ANSI Y-14.5 and the sketching of simple machine parts are also discussed.

Machine Tool Technology 10A
Introduction to CAD/CAM
3 units; 3 hours lecture, 1 hour lab
Credit, degree applicable
Transfer CSU
This course covers the study of the fundamental concepts of Computer Aided Manufacturing (CAM). Concepts explored will include the application of computers in manufacturing, Computer Aided Design (CAD), Computer Numerical Control (CNC) programming, Automated Manufacturing, and Integrated CAD/CAM.

Machine Tool Technology 10B
Computer Numerical Control Programming
3 units; 3 hours lecture, 1 hour lab
Prerequisite: Machine Tool Technology 10A or equivalent;
Machine Tool Technology 40 or equivalent; and Machine Tool Technology 13A or 46 or equivalent with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This course covers the study of Computer Numerical Control (CNC) programming with emphasis on contouring, canned cycles, cutter diameter compensation, looping, macro subroutines and multiple part programming for three axis milling machines and CNC lathes.

The hours per week of courses may be adjusted based on the length of the term.

Machine Tool Technology – A.S. Degree and Certificates of Achievement

(Industry and Technology Division)

The machine tool technology program prepares students for employment in machine shops, tool rooms, and instrument and experimental laboratories and provides upgrade opportunities for employed industrial personnel. Students gain proficiency in the set-up and operation of drilling machines, lathes, mills, grinders, electrical discharge machines, Computer Numerical Control (CNC) lathes, CNC milling machines, and computer aided manufacturing systems. Competencies will be assessed regularly in accordance with skill standards established by the National Institute of Metalworking Skills (NIMS). Students completing the program may enter industry as an advanced apprentice machinist or machine operator and anticipate advancement to machinist, tool and die maker, experimental machinist, or numerical control programmer.

El Camino College Major Requirements

Complete the courses in one of the following options: Machinist or Numerical Control Programmer. At least 50% of the courses required for the major must be completed at El Camino College.

Machinist Option: Machine Tool Technology 2, 10A, 16ab*, 40, 101abcd*, 103abcd*, 105abcd*, 107abcd* (*one semester of)
Total Units: 28

Numerical Control Programmer Option: Machine Tool Technology 2, 10A, 10B, 10J, 16ab*, 40, 101abcd*, 103abcd*, 105abcd*; one course from: Machine Tool Technology 10K, 11abcd* (*one semester of)
Total Units: 33

Recommended Electives: Computer Aided Design/Drafting 5, 10abcd, 31abcd, 45, Machine Tool Technology 95abcd, 99abc, Quality Assurance 4, 8, Technical Mathematics 1, Welding 15ab

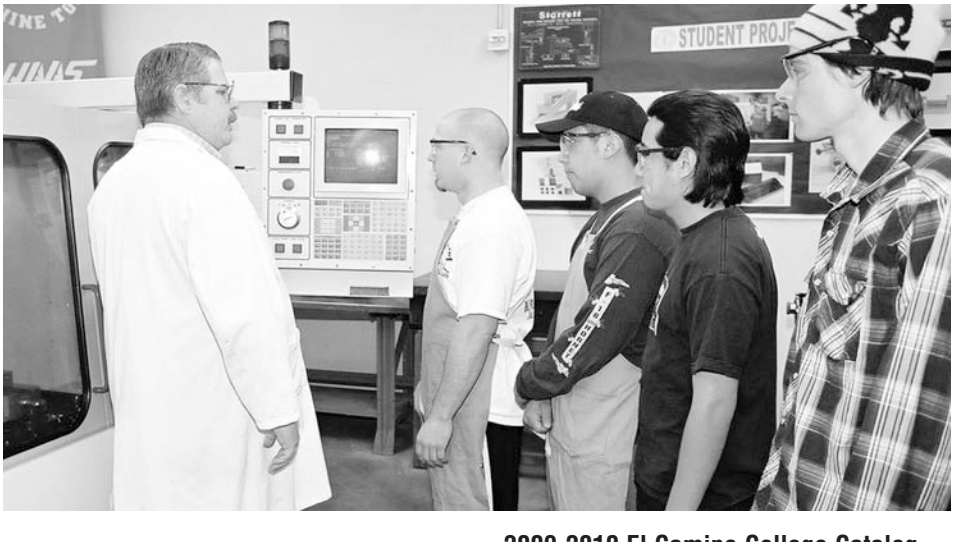
Certificates of Achievement

A Certificate of Achievement will be granted to students completing the courses in the CNC Machine Operator or Machinist or Numerical Control Programmer option. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.

CNC Machine Operator Option (pending approval by the California Community College System Office): 101abcd,* 103abcd,* 105abcd,* 107abcd* (*one semester of)
Total Units: 16

Machinist Option: Machine Tool Technology 2, 10A, 16ab*, 40, 101abcd*, 103abcd*, 105abcd*, 107abcd* (*one semester of)
Total Units: 28

Numerical Control Programmer Option: Machine Tool Technology 2, 10A, 10B, 10J, 16ab*, 40, 101abcd*, 103abcd*, 105abcd*; one course from: Machine Tool Technology 10K, 11abcd* (*one semester of)
Total Units: 33



Machine Tool Technology 10J
Numerical Control Graphics Programming

3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: Machine Tool Technology 10A, Machine Tool Technology 13A, Machine Tool Technology 40 or equivalent
Credit, degree applicable
Transfer CSU

This course covers Computer Aided Manufacturing (CAM), emphasizing interactive graphics programming for Numerical Control (NC) machines. Concepts studied will include interactive geometry construction, tool motion, machine functions, repetitive programming, graphic output and graphic editing. Students will process programs using interactive graphics computer systems.

Machine Tool Technology 10K
3D Numerical Control Graphics Programming

3 units; 2 hours lecture, 3 hours lab
Prerequisite: Machine Tool Technology 10J with a minimum grade of C
Credit, degree applicable
Transfer CSU

This course covers Computer Aided Manufacturing (CAM), emphasizing interactive graphics programming for Numerical Control (NC) machines. Students will utilize various techniques of creating geometry on multiple work planes, three dimensional (3-D) surface tool path creation and manipulation, implementing 4th and 5th axis machining, generating surface to surface intersections, creating blends between surfaces, creating roughing operations for 3D, and CAD data conversion for the purpose of 3D machining.

Machine Tool Technology 11abcd
(formerly 10G)
Numerical Control Graphics Programming with CATIA

3 units; 2 hours lecture, 3 hours lab
Prerequisite: Computer Aided Design/ Drafting 31abcd with a minimum grade of C
Recommended Preparation: Computer Aided Design/Drafting 31abcd and Machine Tool Technology 101abcd
Credit, degree applicable
Transfer CSU

This is a course in computer aided numerical control programming emphasizing interactive computer graphics with CATIA *(*registered trade mark of Dassault Systems). Concepts explored include interactive geometry and surface construction, tool motion created using Prismatic Machining and Multi-Axis Surface Milling functions, graphic editing, graphic output, repetitive programming, and complex surface machining for three, four, and five axis machining centers.

Machine Tool Technology 16ab
General Metals

3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU

This course covers the general skills of metal working: machine shop practice, welding, bench metal, art metal, forge, foundry and sheet metal, design, construction, and occupational exploration.

Note: Letter grade or P/NP option.

Machine Tool Technology 40
Machine Shop Calculations

3 units; 3 hours lecture
Recommended Preparation: Technical Mathematics 1 or equivalent
Credit, degree applicable
Transfer CSU

This course covers the study of machine shop problems involving the solution of formulas related to screw threads, feeds and speeds, spur gears, simple and angular indexing. Geometric figures, angles, triangles, circles, arcs, trigonometric functions, compound angles and oblique triangles will also be introduced.

Machine Tool Technology 46
Basic Machine Tool Operation

3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU

In this course students are introduced to the basic principles and operation of machine tools with emphasis on bench operations, drilling, engine lathe, milling, and grinding machines. Standard industry practices and tool set ups are emphasized. Laboratory projects and exercises related to the lectures and demonstrations will be assigned.

Machine Tool Technology 47abcd
NIMS Level I Credential Preparation

0.5 - 2 units; 1.5 - 6 hours lab per week to be arranged
Prerequisite: Machine Tool Technology 13A with a minimum grade of C
Credit, not degree applicable

In this course students develop their machining skills in preparation for the seven categories of NIMS (National Institute for Metalworking Skills) Level I credential examinations. Skill development activities will focus on safe machining practices, blueprint reading, machine tool calculations, workpiece inspection, set up, and operation of conventional machine tools.

Note: Pass/no pass only.

Machine Tool Technology 48abcd
NIMS Level II Credential Preparation

0.5 - 2 units; 1.5 - 6 hours lab per week to be arranged
Prerequisite: Machine Tool Technology 13A with a minimum grade of C
Credit, not degree applicable

In this course students develop their machining skills in preparation for the six categories of NIMS (National Institute for Metalworking Skills) Level II credential examinations. Skill development activities will focus on safe machining practices, blueprint reading, machine tool calculations, workpiece inspection, set up, and operation of conventional and CNC (Computer Numerically Controlled) machine tools.

Note: Pass/no pass only.

Machine Tool Technology 50
Special Topics in Machine Tool Technology

Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course

This course is designed to explore topics in Machine Tool Technology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Machine Tool Technology 95abcd
Cooperative Work Experience Education

2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply

Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Machine Tool Technology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.

Note: The total units earned for CWEE may not exceed 16 units.

Machine Tool Technology 99abc
Independent Study

1-3 units; hours to be arranged
Enrollment Limitation: two courses in Machine Tool Technology with a minimum grade of B in each and acknowledgement of the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply

This course provides special advanced studies in a subject field of Machine Tool Technology not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Machine Tool Technology projects (60 hours per unit).

Note: Refer to page 11 of this Catalog for eligibility requirements.

Machine Tool Technology 101abcd
Introduction to Conventional and CNC Machining

4 units; 2 hours lecture, 6 hours lab
Credit, degree applicable
Transfer CSU

This introductory course covers the principles and operation of conventional and CNC (Computer Numerically Controlled) machine tools with an emphasis on safety, measurement, hand tools, power saws, drilling machines, lathes, and milling and grinding machines focusing on practices and setups used in industry.

Note: Letter grade or P/NP option.

Machine Tool Technology 103abcd
Conventional and CNC Turning

4 units; 2 hours lecture, 6 hours lab
Prerequisite: Machine Tool Technology 46 or 101abcd (or the former Machine Tool Technology 13A) with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU

This course covers at an advanced level the principles and operation of conventional and CNC (Computer Numerically Controlled) machine tools with an emphasis on the set up and operation of lathes. Topics will include safety, turning, drilling, boring, threading, cutting tools, CNC programming practices, and setups as applied in industry.

Note: Letter grade or P/NP option.

The hours per week of courses may be adjusted based on the length of the term.

Machine Tool Technology 105abcd
Conventional and CNC Milling
4 units; 2 hours lecture, 6 hours lab
Prerequisite: Machine Tool Technology 46 or 101abcd (or the former Machine Tool Technology 13A) with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This course covers at an advanced level the principles and operation of conventional and CNC (Computer Numerically Controlled) machine tools with an emphasis on the set up and operation of milling machines. Topics will include safety, drilling, milling, tapping, tooling, CNC programming practices, and setups as applied in industry.
Note: Letter grade or P/NP option.

Machine Tool Technology 107abcd
Advanced Manufacturing Processes
4 units; 2 hours lecture, 6 hours lab
Prerequisite: Machine Tool Technology 46 or 101abcd (or the former Machine Tool Technology 13A) with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This course covers the principles and operation of machine tools with an emphasis on advanced manufacturing processes and machines, such as EDM (Electrical Discharge Machines), water abrasive jet machines, and grinding machines. Additional topics will include abrasives, coordinate measuring machines, advanced precision measurement, GD&T (Geometric Dimensioning and Tolerancing), optical comparators, and practices and setups as applied in industry.
Note: Letter grade or P/NP option.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Manufacturing Technology – A.S. Degree and Certificate of Achievement

(Industry and Technology Division)

The manufacturing technology program prepares students for employment in fields related to manufacturing. By completing the degree or certificate requirements, students acquire a foundation in computer aided design, machining, electronics, technical mathematics, and welding. Students also select a career field in which to specialize or broaden their knowledge. These fields include computer aided design/drafting, electronics, environmental technology, machine tool technology, quality assurance, or welding. Competencies will be assessed regularly by student performance in the classroom and laboratory.

El Camino College Major Requirements
Machine Tool Technology 101abcd*; Machine Tool Technology 10A or Computer Aided Design/Drafting 10abcd*; Machine Tool Technology 2 or Computer Aided Design/Drafting 5; Technical Mathematics 1 or Machine Tool Technology 40; Electronics and Computer Hardware Technology 11; Welding 15ab*; and a minimum of 18 units from the following: Computer Aided Design/Drafting 26abcd*, 27abcd*, 28abcd*, 31abcd*, 32abcd*, 33abcd*, 34abcd*, 37abcd*, 45, 47, 49; Electronics and Computer Hardware Technology 22, 110, 112, 120, 122, 124, 130, 131, 140, 142, 144, 150, 152, 190, 191, 192, 193, 194; Engineering Technology 10, 12, 14, 16, 18; Environmental Technology 100, 110, 120, 130, 140, 150, 160, 200, 210; Machine Tool Technology 10B, 10J, 10K, 11abcd, 103abcd*, 105abcd*, 107abcd*; Manufacturing Technology 1, 2, 3, 70, 75; Quality Assurance 1, 8, 9; Welding 1, 2abc, 19ab, 21, 23abc, 40abcd, 45ab; Cooperative Career Education courses: a maximum of 4 units from either Computer Aided Design/Drafting 95abcd, Electronics and Computer Hardware Technology 95abcd, Machine Tool Technology 95abcd, Quality Assurance 95abcd, Welding 95abcd
(*one semester of)
Total Units: 37

Certificate of Achievement
A Certificate of Achievement will be granted upon completion of the courses listed below. At least 50% of the courses required for the Certificate of Completion must be completed at El Camino College.
Machine Tool Technology 101abcd*; Machine Tool Technology 10A or Computer Aided Design/Drafting 10abcd*; Machine Tool Technology 2 or Computer Aided Design/Drafting 5; Technical Mathematics 1 or Machine Tool Technology 40; Electronics and Computer Hardware Technology 11; Welding 15ab*; and a minimum of 18 units from the following: Computer Aided Design/Drafting 26abcd*, 27abcd*, 28abcd*, 31abcd*, 32abcd*, 33abcd*, 34abcd*, 37abcd*, 45, 47, 49; Electronics and Computer Hardware Technology 22, 110, 112, 120, 122, 124, 130, 131, 140, 142, 144, 150, 152, 190, 191, 192, 193, 194; Engineering Technology 10, 12, 14, 16, 18; Environmental Technology 100, 110, 120, 130, 140, 150, 160, 200, 210; Machine Tool Technology 10B, 10J, 10K, 11abcd, 103abcd*, 105abcd*, 107abcd*; Manufacturing Technology 1, 2, 3, 70, 75; Quality Assurance 1, 8, 9; Welding 1, 2abc, 19ab, 21, 23abc, 40abcd, 45ab; Cooperative Career Education courses: a maximum of 4 units from either Computer Aided Design/Drafting 95abcd, Electronics and Computer Hardware Technology 95abcd, Machine Tool Technology 95abcd, Quality Assurance 95abcd, Welding 95abcd
(*one semester of)
Total Units: 37

Manufacturing Technology

Manufacturing Technology 1
Orientation to Manufacturing
1 unit; 1 hour lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU

This course provides an overview of manufacturing industries in modern society and processes involved in manufacturing today. Career opportunities and preparation required for employment in the field are emphasized.

Manufacturing Technology 2
Materials and Processes of Manufacturing
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU

This course introduces students to materials of manufacture, their properties, characteristics, classification, and treatment. The manufacturing processes of material removal, fabrication, joining, surface preparation, casting, molding, forging, and extruding are also covered. The course will assist the student in preparing for certification as a CMT (Certified Manufacturing Technologist) sponsored by the SME (Society of Manufacturing Engineers).

Manufacturing Technology 3
Integrated Manufacturing Systems
2 units; 2 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU

In this course students are introduced to the flow of materials and information in a manufacturing organization. Topics covered include planning and control systems, process engineering, management theory, materials management, manufacturing economics, quality assurance, CAD (Computer Aided Design), and CAM (Computer Aided Manufacturing). The course will assist the student in preparing for certification as a CMT (Certified Manufacturing Technologist) sponsored by the SME (Society of manufacturing Engineers).

Manufacturing Technology 50
Special Topics in Manufacturing Technology
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course

This course is designed to explore topics in Manufacturing Technology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Manufacturing Technology 70
Basic Robotics
2 units; 1 hour lecture, 3 hours lab
Credit, degree applicable
Transfer CSU

In this course, students will explore the technologies used to fabricate model robotic systems. Additional topics covered include basic electronics theory, electromechanical fabrication, micro-controller operation, machining processes, metal fabrication, and careers in technology. Project building and problem solving will be stressed.

Manufacturing Technology 75
Integrated Robotic and Automated Technologies
3 units; 2 hours lecture, 4 hours lab
Recommended Preparation: Electronics and Computer Hardware Technology 11, Manufacturing Technology 70
Credit, degree applicable
Transfer CSU

This course covers robotic and automation applications with emphasis on imbedded electronics, micro-controller programming, motors, and drive trains. Additional topics covered include electronics theory, electromechanical fabrication, sensors, manufacturing materials and processes, and career fields in which robotic applications are used. Students will construct, program, and test a vehicular or process robot.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Manufacturing Technology 75A
Integrated Robotic and Automated Technologies I
1.5 units; 1 hour lecture, 2 hours lab
Recommended Preparation: Electronics and Computer Hardware Technology 11, Manufacturing Technology 70
Credit, degree applicable;
Transfer CSU

This is the first course in a two course sequence that covers robotic and automation applications with emphasis on electronics theory, electro-mechanical fabrication, motors, and drive trains. Students will construct, program, and test a vehicular or process robot.

Note: The two course sequence Manufacturing Technology 75A and 75B is the same as Manufacturing Technology 75.

Manufacturing Technology 75B
Integrated Robotic and Automated Technologies II
1.5 units; 1 hour lecture, 2 hours lab
Recommended Preparation: Electronics and Computer Hardware Technology 11, Manufacturing Technology 70, 75A
Credit, degree applicable;
Transfer CSU

This is the second course in a two course sequence that covers robotic and automation applications with emphasis on imbedded electronics, micro-controller programming, sensors, manufacturing materials and processes. Students will construct, program, and test a vehicular or process robot to satisfy instructor assigned goals or tasks. Note: The two course sequence Manufacturing Technology 75A and 75B is the same as Manufacturing Technology 75.

Manufacturing Technology 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Manufacturing Technology with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply

This course provides special advanced studies in a subject field of Manufacturing Technology not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Manufacturing Technology projects (60 hours per unit).

Note: Refer to page 11 of this Catalog for eligibility requirements.

Marketing
See Business

Mathematics
Course prerequisites must be satisfied at El Camino College or another accredited college. A transcript or grade slip is required for verification of a grade from another college.
The El Camino College Mathematics Placement Test may be taken only for initial mathematics course placement. Skipping a course by re-taking the Mathematics Placement Test is not permitted.

Mathematics 10A
Basic Arithmetic Skills, Part I
2 units; 2 hours lecture
Credit, not degree applicable
This introductory arithmetic course is designed to develop number and operation sense using whole numbers and fractions. Topics include writing whole numbers in various forms, estimation, divisibility tests, and applications.
Note: Students enrolled in this course are required to participate in individual and group activities.

Mathematics 10B
Basic Arithmetic Skills, Part II
2 units; 2 hours lecture
Prerequisite: Mathematics 10A with a minimum grade of C
Credit, not degree applicable
This course is a continuation of arithmetic and is designed to develop number and operation sense using decimals and percents and to develop problem-solving skills using proportions. Topics include writing decimals in various forms, estimation, ratios, and applications.
Note: Students enrolled in this course are required to participate in individual and group activities.

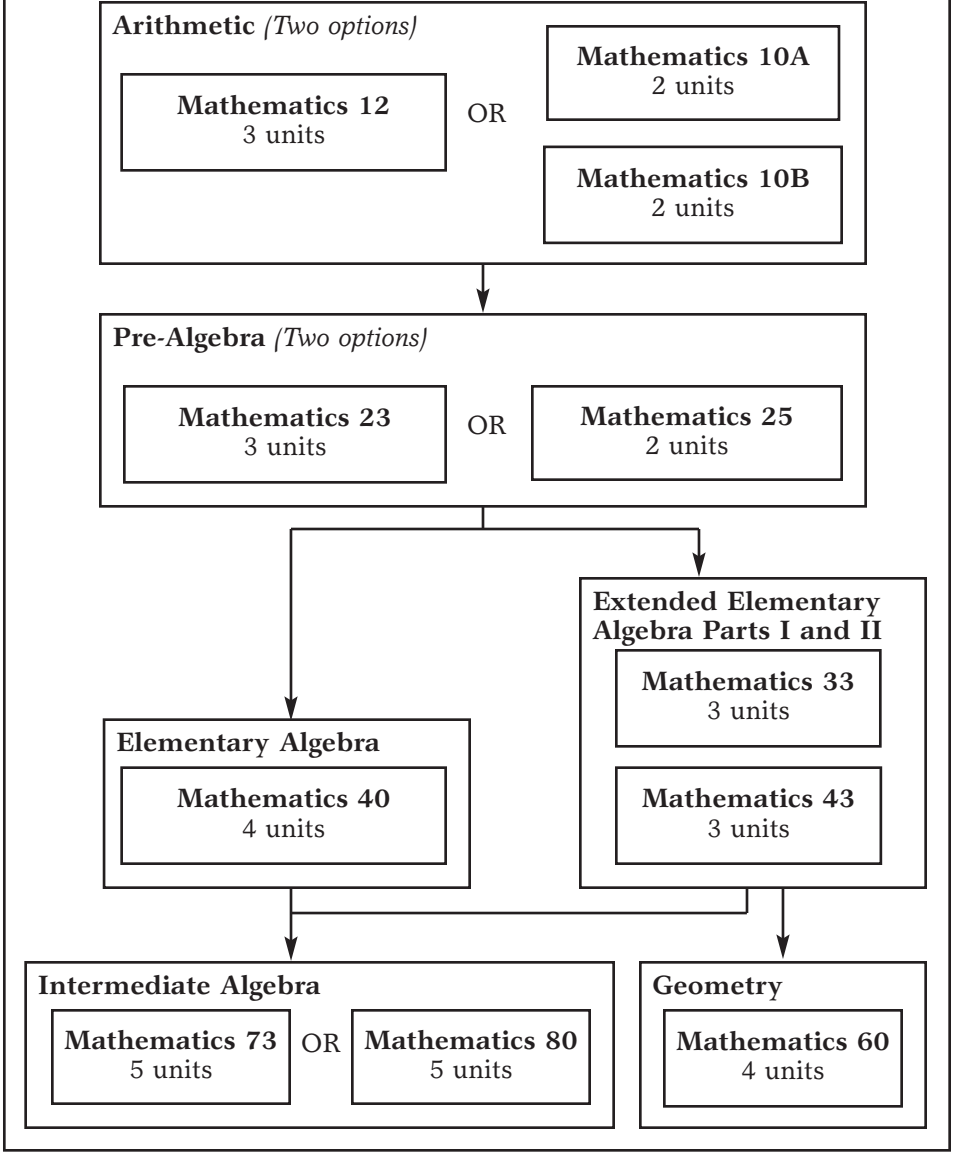
Mathematics 12
Basic Arithmetic Skills
3 units; 4 hours lecture
Credit, not degree applicable
This introductory arithmetic course is designed to develop number and operation sense using whole numbers, fractions, decimals, and percents, as well as develop problem-solving skills. Topics include writing whole numbers and decimals in various forms, estimation, ratios, proportions, and applications.
Note: Students enrolled in this course are required to participate in individual and group activities.
Note: Mathematics 12 is the same as Mathematics 10A and 10B.

Mathematics – A.S. Degree
(Mathematical Sciences Division)

The degree provides the student with sufficient depth to support a lifelong interest in mathematics, and is suitable for the student who plans to transfer in mathematics. The core of the major is the calculus sequence, in which the student will acquire a conceptual understanding of the principles of differential and integral calculus for functions of one and several variables, as well as the ability to apply calculus techniques in a variety of applications. A minimum of one additional course is required to provide the student with greater breadth in mathematics. Competency will be assessed by evaluating the student's ability to solve a wide range of calculus and other mathematical problems.

El Camino College Major Requirements
At least 8 units for this degree must be completed at El Camino College.
Mathematics 190, 191, 220; four units from: Mathematics 140, 150, 210, 270;
Physics 1A; Computer Science 1
Total Units: 19-20

Pre-transfer Mathematics Courses
All new students must complete the Mathematics Placement Test.



Mathematics 23
Pre-Algebra
3 units; 4 hours lecture
Prerequisite: Mathematics 10B or 12 with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, not degree applicable
This course bridges the gap between arithmetic and formal algebra, developing number sense and operation sense, in order to formulate and solve algebraic equations with integers, fractions, and percents. Algebraic principles are applied to problems from a variety of fields. Other topics include: proportional reasoning, spatial reasoning, informal geometry and measurement, coordinate graphing, informational graphs, and data collection and description.

Mathematics 25
Pre-Algebra Review
2 units; 2 hours lecture
Prerequisite: Mathematics 10B or 12 with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics
Placement Test) and assessment
Credit, not degree applicable
This course is a review of pre-algebra and meets the needs of students who have previous pre-algebra experience. Topics include the arithmetic operations of addition, subtraction, multiplication, division and exponentiation on the sets of natural numbers, integers, and rational numbers. Knowledge of these operations is extended to evaluate and simplify algebraic expressions as well as to solve linear equations, and application problems.

Mathematics 33
(formerly Mathematics 41A)
Extended Elementary Algebra, Part I
3 units; 4 hours lecture
Prerequisite: Mathematics 23 or Mathematics 25 with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, not degree applicable
This is the first course in the two-course Extended Elementary Algebra sequence, which begins at a slower pace than elementary algebra. Students examine the connections between the order of operation on real numbers and the elementary algebraic ideas of variables, expressions, and equations. Students explore the four fundamental representations of relations between two variables: verbal, algebraic, graphical, and numerical. Linear relations serve as the primary example, but students also study quadratic relations. Students are expected to master basic numeric and algebraic manipulation skills, including combining like terms, expanding products, and elementary factoring.

Mathematics 40
Elementary Algebra
4 units; 4 hours lecture
Prerequisite: Mathematics 23 or Mathematics 25 with a minimum grade of C in prerequisite or qualification by testing
(El Camino College Mathematics Placement Test) and assessment
Credit, degree applicable
This course in elementary algebra includes the study of real number solutions and applications of linear equations, quadratic equations, linear inequalities, and systems of linear equations. Other topics include coordinate graphing or linear equations, factoring techniques, and simplification of rational and radical expressions.
Note: Mathematics 40 is equivalent to one year of high school algebra.

Mathematics 43
(formerly 41B)
Extended Elementary Algebra, Part II
3 units; 4 hours lecture
Prerequisite: Mathematics 33 with a minimum grade of C or equivalent
Credit, not degree applicable
This is the second course in the two-course Extended Elementary Algebra sequence. Students in this course explore the concept of relation and its four fundamental representations: verbal, algebraic, graphical, and numerical. Students show mastery of more advanced algebraic manipulation skills, including extracting roots and more advanced factoring. Students examine systems of linear equations, as well as quadratic, reciprocal and square root relations.

Mathematics 50
Special Topics in Mathematics
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Mathematics more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Mathematics 60
Elementary Geometry
4 units; 4 hours lecture
Prerequisite: Mathematics 40 or Mathematics 41B with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, degree applicable
This is an introductory course in geometry. Topics include: properties of geometric figures including circles, triangles and other polygons, congruence and similarity, and elementary logical reasoning. Formal proof is introduced and used through out the course.
Note: This course is equivalent to one year of high school geometry.

The hours per week of courses may be adjusted based on the length of the term.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Mathematics 73
Intermediate Algebra for General Education

5 units; 5 hours lecture
Prerequisite: Mathematics 40 or 43 with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, degree applicable

This intermediate algebra course is designed for students who are not considering advanced study in the sciences, technology, engineering, or mathematics. In the context of studying basic functions and their graphs, students strengthen and expand their algebra skills. Functions studied include linear, quadratic, polynomial, rational, and radical functions, as well as the absolute value function. Particular emphasis is placed on the operations on functions, solving equations and inequalities, as well as using functions to model real life situations. Other topics include solving systems of equations and applications.

Note: Mathematics 73 serves as a prerequisite course for all transfer-level mathematics course sequences, except the calculus sequence.

Mathematics 80
(formerly 70)
Intermediate Algebra for Science, Technology, Engineering, and Mathematics

5 units; 5 hours lecture
Prerequisite: Mathematics 40 or Mathematics 43 with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, degree applicable

This intermediate algebra course is designed for students who are considering further study in the sciences, technology, engineering, or mathematics. In the context of studying a large library of basic functions and their graphs, students strengthen and expand their algebra skills. The library includes linear, quadratic, polynomial, rational, radical, exponential, and logarithmic functions, as well as inverse functions and the absolute value function. Particular emphasis is placed on the operations on functions, as well as solving equations and inequalities. Other topics include solving systems of equations, operations on complex numbers, and applications.

Note: Mathematics 80 serves as a prerequisite course for all transfer-level mathematics course sequences, including the calculus sequence.

Mathematics 99abc
Independent Study

1-3 units
Enrollment Limitation: Completion of two Mathematics courses that are transferable to CSU or UC with a minimum grade of B in each course and acknowledgement by the instructor with whom the student will work.
Credit, degree applicable
Transfer CSU, UC - limitations apply

This course provides special advanced studies in a subject field of mathematics not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned mathematics research projects (60 hours per unit).

Note: Refer to page 11 of this Catalog for eligibility requirements.

Mathematics 100
Supervised Tutoring: Mathematics

0 units; maximum 72 hours per semester
Corequisite: enrollment in an El Camino College Mathematics Department course
Enrollment Limitation: Referral by instructor or counselor based on assessed academic need
Non-Credit

This course provides students with supervised tutoring related to their assignments in all mathematics courses offered at El Camino College. The tutoring addresses the application of learning skills, the use of learning resources, and the review of course content.

Note: This course is repeatable and open for enrollment at registration and at any time during the semester.

Mathematics 110
Structures and Concepts in Mathematics

3 units; 3 hours lecture
Prerequisite: Mathematics 80 with a minimum grade of C or equivalent
Credit, degree applicable
*Transfer CSU, UC**

As an introduction to the use of logical, quantitative, and spatial reasoning in the discipline of mathematics, students in this course examine the mathematical topics of set theory, numeration, number theory, functions, graphs, patterns and the structure of real numbers. Students investigate the interrelationships among these topics, with a emphasis on algebraic, geometric and kinesthetic modeling, inductive and deductive logic, and proofs using pictures. Designed for pre-service elementary school teachers, this course is appropriate for all students interested in a deeper understanding of the structure of mathematics.

**Note: The maximum UC credit allowed for students completing Mathematics 110, 111, 115, and 116 is one course.*

Mathematics 111
Mathematics for Elementary School Teachers - Geometry, Probability and Statistics

3 units; 3 hours lecture
Prerequisite: Mathematics 60 with a minimum grade of C or equivalent;
and Mathematics 73 or Mathematics 80 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
*Transfer CSU, UC**

This course, designed for preservice elementary school teachers, will examine four content areas: Geometry (plane, solid, and coordinate geometry, congruence, similarity and tessellations); Measurement and Estimation (length, area, and volume); Statistics (graphs, measures of central tendency); and Probability (single and multistaged events, odds and expected values, and normal distributions).

**Note: The maximum UC credit allowed for students completing Mathematics 110, 111, 115, and 116 is one course.*

Mathematics 115
Probability and Statistics for Prospective Elementary School Teachers

4 units; 4 hours lecture
Prerequisite: Mathematics 80 with a minimum grade of C or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**

In this course, designed for prospective elementary school teachers, student focus on the conceptual and procedural understanding of probability and statistics. During the statistics portion of the course, students investigate the creation and interpretation of graphs, random variables and sampling, measures of central tendency and dispersion, analysis of experiments including hypothesis testing, design of experiments, and data gathering. During the probability portion of the course, students explore the basic laws of probability, including dependent, independent, and mutually exclusive events, odds, and expected outcomes. Group activities and hands-on activities, as well as the use of graphing calculators and statistical software, are integrated throughout the course.

**Note: The maximum UC credit allowed for students completing Mathematics 110, 111, 115, and 116 is one course.*

Mathematics 116
Geometry and Measurement for Prospective Elementary School Teachers
4 units; 4 hours lecture
Prerequisite: Mathematics 60 and Mathematics 110 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
*Transfer CSU, UC**
In this course, designed for prospective elementary school teachers, students focus on the conceptual and procedural understanding of geometry and measurement. Students explore informal geometry, congruence similarity, constructions, transformations, tessellations, and measurement involving both English and metric units in one, two, and three dimensions. The use of appropriate units in real-world geometric situations is emphasized throughout the course. Group activities, hands-on activities and use of computer software are integrated throughout the course.
**Note: The maximum UC credit allowed for students completing Mathematics 110, 111, 115, and 116 is one course.*

Mathematics 120
Nature of Mathematics
3 units; 3 hours lecture
Prerequisite: Mathematics 73 or Mathematics 80 with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, degree applicable
Transfer CSU, UC
This course surveys general ideas and concepts of mathematics, including mathematics of finance, set theory, probability, statistics, voting systems, logic, and types of geometries.
Note: This course meets the CSU general education requirement for mathematics and quantitative reasoning.

Mathematics 130
College Algebra
3 units; 3 hours lecture
Prerequisite: Mathematics 73 or Mathematics 80 with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, degree applicable
*Transfer CSU UC**
In this course, students will explore polynomial, radical, rational, exponential, and logarithmic functions and their graphs, as well as sequences, series, combinatorics, and the Binomial Theorem.
**Note: The maximum UC credit allowed for students completing Mathematics 130 and Mathematics 180 is one course.*

Mathematics 140
Finite Mathematics for Business and Social Sciences
4 units; 4 hours lecture
Prerequisite: Mathematics 73 or Mathematics 80 with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, degree applicable
Transfer CSU, UC
This course consists of a study of the Gauss-Jordan method, matrices, linear programming from a geometrical approach, logic sets, combinatorics, probability, Bayes' theorem, random variables, descriptive statistics, and Markov chains.

Mathematics 150
Elementary Statistics with Probability
4 units; 4 hours lecture
Prerequisite: Mathematics 80 with a minimum grade of C or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, degree applicable
*Transfer CSU, UC**
The focus of this course is the basic practice of statistics, including descriptive statistics, inferential statistics, and the role probability plays in statistical analysis. Students calculate and interpret statistical parameters using graphing calculators with statistical testing capabilities and statistical software, as well as by hand. Major topics include methods of data collection and simulation; measures of central tendency, variability, and relative position; graphical summaries of data; linear regression and correlation; distributions, including normal and binomial distributions; probability theory; and inferential statistical methods. Students choose, justify, use, and interpret the results of inferential techniques, such as confidence intervals, hypothesis texts, goodness of fit, analysis of variance, and nonparametric tests.
**Note: The maximum UC credit allowed for students completing Mathematics 150 and Psychology 9A or Mathematics 150 and Sociology 109 is one course.*

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Mathematics 160
Calculus for the Biological, Management and Social Sciences I
4 units; 4 hours lecture
Prerequisite: Mathematics 130 or Mathematics 180 with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Recommended Preparation: Mathematics 130 with a minimum grade of C
Credit, degree applicable
*Transfer CSU, UC**
This course includes a study of differentiation and integration of algebraic and exponential functions of one variable, definite integrals and applications.
**Note: The maximum UC credit allowed for students completing Mathematics 160 and 161 and Mathematics 190 and 191 is one series.*

Mathematics 161
Calculus for the Biological, Management and Social Sciences II
3 units; 3 hours lecture
Prerequisite: Mathematics 160 with a minimum grade of C
Credit, degree applicable
*Transfer CSU, UC**
This course includes a study of techniques of integration, multi-variable calculus, differential equations, and infinite series as well as topics such as probability and trigonometry.
**Note: The maximum UC credit allowed for students completing Mathematics 160 and 161 and Mathematics 190 and 191 is one series.*

Mathematics 170
Trigonometry
3 units; 3 hours lecture
Prerequisite: Mathematics 60 and Mathematics 80 with a minimum grade of C in prerequisite or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, degree applicable
Transfer CSU
This course includes a study of trigonometric functions, their inverses, trigonometric identities, equations, complex numbers, graphs of trigonometric functions, and applications.
Note: One year of high school geometry is equivalent to Mathematics 60.

Mathematics 180
Pre-Calculus
5 units; 5 hours lecture
Prerequisite: Mathematics 170 with a minimum grade of C
Credit, degree applicable
*Transfer CSU, UC**
This course includes a study of algebraic, exponential, logarithmic, and trigonometric functions; an introduction to the algebra of matrices; sequences and series; an introduction to analytic geometry; and applications.
**Note: The maximum UC credit allowed for students completing Mathematics 180 and Mathematics 130 is one course.*

Mathematics 190
Single Variable Calculus and Analytical Geometry I
5 units; 5 hours lecture
Prerequisite: Mathematics 180 with a minimum grade of C or qualification by testing (El Camino College Mathematics Placement Test) and assessment
Credit, degree applicable
*Transfer CSU, UC**
Topics in this course include: limits, derivatives of algebraic, trigonometric and transcendental functions; differentials; graphing; applications; definite and indefinite integrals. Problem solving using a computer algebra system is integrated throughout the course.
**Note: The maximum UC credit allowed for students completing Mathematics 160 and 161 and Mathematics 190 and 191 is one series.*

Mathematics 191
Single Variable Calculus and Analytic Geometry II
5 units; 5 hours lecture
Prerequisite: Mathematics 190 with a minimum grade of C
Credit, degree applicable
*Transfer CSU, UC**
This course includes methods of integration; applications of integration; improper integrals; numerical integration; infinite sequences, series and power series; parametric equations, polar coordinates; as well as conic sections.
**Note: The maximum UC credit allowed for students completing Mathematics 160 and 161 and Mathematics 190 and 191 is one series.*

Mathematics 210
Introduction to Discrete Structures
4 units; 4 hours lecture
Prerequisite: Mathematics 190 with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course blends mathematical reasoning, combinatorial analysis, discrete structures, algorithmic thinking and modeling to study the problems that occur in computer science and mathematics. Topics covered include: logic, sets, proofs, functions, relations, number theory, counting, graphs and trees.

Mathematics 220
Multi-Variable Calculus
5 units; 5 hours lecture
Prerequisite: Mathematics 191 with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course contains topics in differential calculus in several variables, including partial differentiation; tangent planes to surfaces; directional derivatives; and optimization problems. Topics in integral calculus in several variables include line, surface, and volume integrals, as well as the theorems of Green, Gauss (Divergence) and Stokes as generalizations of the Fundamental Theorem Calculus. Other topics include vector algebra and solid analytic geometry.

Mathematics 270
Differential Equations with Linear Algebra
5 units; 5 hours lecture
Prerequisite: Mathematics 220 with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course consists of a study of first order ordinary differential equations, systems of linear equations, matrices, determinants, vector spaces, linear transformations, linear second order ordinary differential equations, power series solutions, numerical methods, Laplace transforms, eigenvalues, eigenvectors, systems of linear differential equations and applications.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Medical Terminology

Medical Terminology 1
(formerly Medical Assistant 4)
Medical Terminology
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
This course provides study and practical application of a medical vocabulary system according to body systems. Students review the basic construction of medical words, concentrating on word origins, root words, prefixes, and suffixes. Word structure, recognition, analysis, definition, spelling, and pronunciation are presented in the context of medical terms for organs, diseases, symptoms, diagnostic tests, and medical surgical procedures.

Medicine
See Pre-Medicine

Meteorology
See Geography

Microbiology

Microbiology 33
General Microbiology
5 units; 3 hours lecture, 6 hours lab
Prerequisite: Biology 10 or Anatomy 30 or Anatomy 32 or Physiology 31 or Anatomy and Physiology 34A; and Chemistry 4 or Chemistry 20 or Chemistry 1A or Chemistry 21A or equivalent with a minimum grade of C in prerequisite
Transfer CSU, UC
This course is a study of microbial anatomy and physiology, classification, microbes in water, air, soil, food, sewage, and medical aspects of microbiology. It also includes the study of fundamental techniques in the growth, culture, and identification of microorganisms. Laboratory experiments are performed by students to reinforce principles of microbiology discussed in lecture. This course is designed for students planning to pursue careers in the health sciences or other life sciences.

Music

Music 1
Music Fundamentals
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU, UC
This course introduces the fundamentals of music theory. It prepares student for further study in theory and musicianship and serves to enhance the study of music for all interested students. Beginning with pitch and rhythm notation, the keyboard and major scales, the course proceeds through intervals, triads, seventh chords, inversions, minor scales, church modes, nonharmonic tones, and the analysis of small, traditional forms. Included are terms and symbols for tempi, dynamics, and repeats.

Music 2A
Sightsinging
2 units; 2 hours lecture
Credit, degree applicable
Transfer CSU, UC
This course develops fundamental skills for reading and singing music at sight. This includes pitch and rhythm notation, key signatures, intervals, major and minor modes, and melodies. Class assignments will incorporate exercises in sightsinging, including melodic and rhythmic dictation.

Music 2B
Advanced Sightsinging
2 units; 2 hours lecture
Prerequisite: Music 1 or 2A or 31A with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU, UC
This course continues the development of essential skills for reading and singing music at sight, including ear training and singing of major and minor mode-scales, intervals, chords, rhythms and melodies of increasing difficulty. Class assignments will incorporate exercises in melodic, rhythmic and harmonic sightsinging and dictation.

Music 3
Introduction to Music Theory
3 units; 3 hours lecture
Enrollment Limitation: ability to read music notation (treble or bass clef and rhythm/meter)
Credit, degree applicable
Transfer CSU
This course is designed for students who read music but have little or no background in music theory. Emphasis is placed on music notation, the piano keyboard, rhythm and meter, major and minor scales and key signatures, intervals, chords, musicianship, and corresponding aural skills.

Music – A.A. Degree and Certificate of Achievement

(Fine Arts Division)

By completing the degree or certificate requirements, students gain theoretical and practical knowledge of the music and/or entertainment industries. The degree provides students with a comprehensive foundation in music theory, history, and performance. This is achieved through a structured training program which includes solos, ensembles, musicianship, basic vocal, keyboard, and technological skills. Completing the certificate requirements prepares students for entry-level positions in music merchandising, audio for film/video production, computer music synthesis, songwriting, and recording engineering. Students will demonstrate proficiency throughout the program by analyzing, writing, interpreting, and performing pieces of music, or through demonstrating skills in music technology. Program assessment is measured by juried and public performances, program completion, transferability, and periodic program review.

El Camino College Major Requirements
8 units from Music Theory: Music 3A, 3B, 3C
6 units from History: Music 15A, 15B
4 units from Keyboard: Music 31A, 31B, 31C, 31D, 32abcd
2 units from Voice: Music 18ab, 19abcd, 40abcd, 41abcd
4 units from Music 23abcd
Performance - minimum of six units: Music 52abcd, 53abcd, 55abcd, 57abcd, 64abcd, 65abcd, 67abcd, 68abcd, 69abcd, 70abcd, 71abcd, 72abcd
Recommended Electives: Music 2A, 2B, 5, 8A, 8B, 20abcd, 22abcd, 30ab, 60abcd, 61abcd, 62abcd, 63abcd, 76abcd, 79abcd, 80, 81A, 81B, 90abcd, 131ab
Total Units: 30

Certificate of Achievement
Commercial Music (pending approval by the California Community Colleges System Office): A Certificate of Achievement will be granted upon completion of the courses listed below. Music 82abc, 84, and 85ab must be completed at El Camino College.
Music 1, 80abc, 81A, 81B, 82abc,* 83abcd,* 84, 85ab* (*one semester of)
Total Units: 20

Preparations for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Music 3A
Theory and Musicianship I
4 units; 5 hours lecture
Prerequisite: Music 1 with a minimum grade of C or equivalent
Recommended Preparation: Music 2A; Music 31A or equivalent; eligibility for English 84 or ESL 52C
Credit, degree applicable
Transfer CSU, UC
This course in music theory for the music major commences with a review of music-fundamentals terminology followed by an expansion of the concept of tonality in vocal and instrumental music from all style periods. Class assignments will focus on acquiring the descriptive language of chord grammar and mastery of the voice-leading principles of standard SATB (Soprano, Alto, Tenor, Bass) part-writing. In addition, students will construct melodic-harmonic reductions of a tonal musical composition. Appropriate exercises in sight-singing, ear training, dictation, and keyboard harmony will accompany analytical work.

Music 3B
Theory and Musicianship II
4 units; 5 hours lecture
Prerequisite: Music 3A with a minimum grade of C or equivalent
Recommended Preparation: Music 2A or 2B; Music 31B or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is a continuation of Music 3A and includes the enlargement of the analytical vocabulary by the addition of chord symbols found in commercial music, figured-bass realization, and by the inclusion of all non-dominant sevenths, of major and minor dominant ninths, and of altered chords. Analysis from the literature will focus on vertical/linear structural versus prolongation events as well as species counterpoint in smaller-to-larger-scale formal units. Appropriate exercises in sight-singing, ear training, dictation, and keyboard harmony will accompany analytical work.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Music 3C
Theory and Musicianship III
4 units; 5 hours lecture
Prerequisite: Music 3B with a minimum grade of C and Music 31B or equivalent with a minimum grade of C
Recommended Preparation: Music 8A or 8B, or concurrent enrollment; Music 15A or 15B
Credit, degree applicable
Transfer CSU, UC
This course is a continuation of Music 3B and completes the vertical chromatic vocabulary. Analysis from the literature will focus on advanced modulation, sonorities including 9th, 11th, and 13th chords, large first-rondo and sonata forms, and the principles of instrumentation and orchestration. Appropriate exercises in sight-singing, harmonic reduction, dictation, and keyboard harmony will accompany analytical work.

Music 5
Commercial/Jazz Theory and Musicianship
3 units; 3 hours lecture
Prerequisite: Music 1 with a minimum grade of C or equivalent
Recommended Preparation: Music 3A or equivalent
Credit, degree applicable
Transfer CSU, UC
Topics covered in this course include harmonic, rhythmic and melodic vocabularies; chord-scale relationships; basic keyboard applications; written transcriptions of recorded performances; ear training; composition; and music manuscript preparation.

Music 7
Exploring Music in Education
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU
This course is designed to introduce music to students interested in elementary education. It will be comprised of the fundamentals of music, singing, and playing the recorder, rhythm, and accompanying instruments. Also included will be music listening skills and an introduction to music of different cultures and styles. Students will attend selected musical events offered by the El Camino College Center for the Arts.

Music 8A
Counterpoint
2 units; 2 hours lecture
Prerequisite: Music 3A with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to contrapuntal procedures of the 16th, 18th, and 20th centuries covering species counterpoint and imitative counterpoint in two voices.
Note: This course is offered in the spring semester only.

Music 8B
Counterpoint
2 units; 2 hours lecture
Prerequisite: Music 8A with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is a continuation of Music 8A incorporating more advanced contrapuntal procedures of the 16th, 18th and 20th centuries, namely species counterpoint and imitative counterpoint in three and four voices.
Note: This course is offered in the spring semester only.

Music 11
Music Appreciation Survey
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the major stylistic periods of Western art music from the Middle Ages until the end of the 20th Century. An emphasis will be placed on the music heard in North American and European concert halls. Examples will be presented in the context of contemporaneous social, political, and artistic movements and events. Basic musical elements, terminology, voice categories, and instruments of the orchestra will be included.

Music 12
Music Cultures of the World
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the styles, techniques, performers, and historical evolution of Western and non-Western music. Emphasis is placed on African, Asian, Latin American, and Polynesian music and the relationship between the music and the culture. In addition, American ethnic music and jazz will be presented.

Music 13
Survey of Jazz
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses primarily on the techniques, styles, performers, and historical evolution of jazz. In addition, a survey of African and African-American predecessors of jazz will be presented.

Music 15A
Music History and Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the major stylistic periods of music up to 1750. The evolution of Western art music from the time of ancient Greece and Rome until the end of the Baroque era will be presented in context with contemporaneous social, political, and artistic movements and events.

Music 15B
Music History and Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the major stylistic periods of music from 1750 to 2000. The evolution of Western art music from the end of the Baroque era until the end of the 20th Century will be presented in context with contemporaneous social, political, and artistic movements and events.

Music 18ab
Voice Class I
2 units; 2 hours lecture, 1 hour lab
Credit, degree applicable
Transfer CSU, UC
This course introduces principles and techniques of singing, musicianship and song repertoire. Attendance at selected musical events at El Camino College Center for the Arts is required.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Music 19abcd
Voice Class II
2 units; 2 hours lecture, 1 hour lab
Prerequisite: one semester of Music 18ab with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course continues the development of vocal technique, musicianship, style and interpretation, with increased emphasis on repertoire development. In each successive semester phonetic diction will be introduced, first in Italian, then Spanish, German, and French. Attendance at selected musical events at El Camino College Center for the Arts is required.

Music 20abcd
Music Production Workshop
1 unit; 3 hours lab
Recommended Preparation: the ability to dance and act
Enrollment Limitation: Audition. Students must be able to match pitch and sing a harmony part.
Credit, degree applicable
Transfer CSU, UC
This course offers the opportunity to participate in a musical theatre production as a member of the chorus or as a soloist.

Music 23abcd
Applied Music/Private Lessons
1 unit; 1 hour lecture, 6 hours lab arranged
Corequisite: large ensemble class at El Camino College
Enrollment Limitation: audition to establish performance proficiency at an intermediate level before or during the first week of the semester
Credit, degree applicable
Transfer CSU, UC
This course is a workshop/recital class which includes a private one hour lesson per week. The student is required to practice on campus a minimum of five hours per week, to enroll and participate in a large performing music ensemble class at El Camino College, and to attend selected musical events offered by the El Camino College Center for the Arts. Selected students may perform in a public recital and in occasional master classes.

Music 30ab
Beginning Jazz Improvisation
2 units; 1 hour lecture, 3 hours lab
Enrollment Limitation: audition at first-class meeting (ability to perform music of moderate difficulty on a standard band instrument or vocally)
Credit, degree applicable
Transfer CSU, UC
This course is a study of the basic techniques of jazz improvisation. Emphasis is placed on the study and application of scales, chords, patterns, and "licks" used by musicians to create improvisations on tonal, modal, and blues-based songs. Except for keyboards and drums, students must provide their own instruments for classroom performances.

Music 31A
Beginning Piano I
2 units; 2 hours lecture, 1 hour lab
Credit, degree applicable
Transfer CSU, UC
This course is designed for the beginning piano student. It introduces music notation and its application to playing piano music and proceeds through pieces and exercises of advancing difficulty for the elementary player. Concepts and techniques of musicianship and music theory are emphasized.

Music 31B
Beginning Piano II
2 units; 2 hours lecture, 1 hour lab
Prerequisite: Music 31A with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is a continuation of Music 31A (Beginning Piano) using increasingly complex materials. Students will attend selected musical events at the El Camino College Center for the Arts.

Music 31C
Intermediate Piano I
2 units; 2 hours lecture, 1 hour lab
Prerequisite: Music 31B with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course continues the development of musical, technical and functional skills using selected repertoire representative of the four stylistic periods, the Baroque, Classic, Romantic and Contemporary. Attendance at specified musical events at El Camino College Center for the Arts is required.

Music 31D
Intermediate Piano II
2 units; 2 hours lecture, 1 hour lab
Prerequisite: Music 31C with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course continues the development of music, technical and functional skills using selected repertoire representative of the four style periods, the Baroque, Classic, Romantic and Contemporary. Attendance at specific musical events at El Camino College Center for the Arts is required.

Music 32abcd
Advanced Piano
2 units; 2 hours lecture, 1 hour lab
Prerequisite: Music 31D with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course continues the development of musical and pianistic skills through the study and performance of moderately advanced piano repertoire from the Baroque, Classic, Romantic, and 20th Century style periods. Attendance at selected musical events at El Camino College Center for the Arts is required.

Music 40abcd
The Singer as Actor
2 units; 2 hours lecture, 1 hour lab
Prerequisite: one semester of Music 18ab with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This performance workshop is designed to introduce and integrate vocal and acting exercises. Emphasis will be placed on observational, interpretive and expressive skills. All types of dramatic musical repertoire will be studied and performed. Attendance at selected musical events offered by the El Camino College Center for the Arts is required.

Music 41abcd
Opera Workshop
2 units; 1 hour lecture, 3 hours lab
Enrollment Limitation: audition
Credit, degree applicable
Transfer CSU
This course develops vocal, musical, and dramatic skills through the research, rehearsal, and performance of selected works and scenes from the standard operatic literature.

Music 43abcd
Beginning Woodwind Instruments
2 units; 2 hours lecture, 1 hour lab
Credit, degree applicable
Transfer CSU, UC
This course for the beginning musician introduces basic skills and techniques for playing a woodwind instrument. Students select from flute, clarinet, saxophone, oboe, or bassoon. Music reading, tone production, breath control, technique, musicianship, and instrument care are emphasized. Students must provide their own instruments.

Music 44abcd
Beginning Brass Instruments
2 units; 2 hours lecture, 1 hour lab
Credit, degree applicable
Transfer CSU, UC
This course for the beginning musician introduces basic skills and techniques for playing a brass instrument. Students select from trumpet, French horn, trombone, euphonium, or tuba. Music reading, tone production, breath control, technique, musicianship, and instrument care are emphasized. Students must provide their own instruments.

Music 45abcd
Beginning Percussion Instruments
2 units; 2 hours lecture, 1 hour lab
Credit, degree applicable
Transfer CSU, UC
This course for the beginning musician introduces basic skills and techniques for playing snare drum and drum set. Music reading, drum rudiments, percussion techniques, and musicianship are emphasized. Students must provide their own sticks and practice pad.

Music 46abcd
Beginning String Instruments
2 units; 2 hours lecture, 1 hour lab
Credit, degree applicable
Transfer CSU, UC
This course for the beginning musician introduces basic skills and techniques for playing a string instrument. Students select from violin, viola, cello, and string bass. Music reading, tone production, technique, musicianship, and instrument care are emphasized. Students must provide their own instruments.

Music 47ab
Beginning Guitar
2 units; 2 hours lecture, 1 hour lab
Credit, degree applicable
Transfer CSU, UC
This course introduces techniques for playing the guitar including holding, stringing, tuning, and fingering. Emphasis will be placed on learning music notation, the fundamentals of music, and the playing of simple melodies, chords, and accompaniment patterns.

Music 48abcd
Intermediate Guitar
2 units; 2 hours lecture, 1 hour lab
Prerequisite: one semester of Music 47ab with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
Music 48abcd is a continuation of Music 47ab. The course focuses on the continued development of reading and playing classical music for the guitar. Fingerboard techniques beyond the first position will be introduced. This course also includes the study of contemporary song styles, accompaniment, and improvisation, using such techniques as pentatonic scales, blues scales, Travis pick, and strumming variations.

Music 50
Special Topics in Music
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Music more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Music 52abcd
Concert Choir
1.5 units; 3 hours lecture
Credit, degree applicable
Transfer CSU, UC
This is a non-audition ensemble designed for the study and performance of choral works of various styles. Emphasis is placed on development of the voice in relationship to choral singing and the continuous growth of musicianship appropriate to choral literature. The ensemble will perform in concert at the conclusion of each semester.
Note: Letter grade or P/NP option.

Music 53abcd
Chorale
2 units; 5 hours lecture
Recommended Preparation: previous choral experience
Enrollment Limitation: Audition during the first week of class. The student needs to have the ability to sing a harmony part.
Credit, degree applicable
Transfer CSU, UC
This course provides an opportunity to participate in a small (30 voice) chamber chorale ensemble. Choral literature of all styles will be performed including folk songs and show tunes. Singers in this ensemble will perform on campus and in the community as well as on concert tours.
Note: Letter grade or P/NP option.

Music 55abcd
College Community Choir
1.5 units; 3 hours lecture
Credit, degree applicable
Transfer CSU, UC
This is a course designed for the study and performance of major choral works in various styles. Although auditions are not required, emphasis will be placed on development of the voice in relation to choral singing, and public performances will be held on campus and in the community. Soloists, as needed, may be auditioned and chosen from among the chorus members.
Note: Letter grade or P/NP option.

Music 57abcd
Women's Chorus
1.5 units; 3 hours lecture
Enrollment Limitation: audition
Credit, degree applicable
Transfer CSU, UC
This course provides an opportunity to participate in a women's choral ensemble. Choral literature of all styles composed or arranged for women's voices will be performed. Singers in this ensemble will perform at the conclusion of each semester.
Note: Letter grade or P/NP option.

Music 58abcd
Beginning Chorus
1.5 units; 3 hours lecture
Credit, degree applicable
Transfer CSU, UC
This course provides students who have limited or no choral experience the opportunity to sing in an ensemble setting. Emphasis is placed on improving the singing voice and learning to identify and interpret basic notation, intervals, and rhythmic patterns. Students will perform in concerts each semester.
Note: Letter grade or P/NP option.

Music 60abcd
Woodwind Ensembles
1 unit; 2 hours lecture
Enrollment Limitation: audition (previous band or orchestra experience or ability to perform music of moderate difficulty on a standard woodwind instrument)
Credit, degree applicable
Transfer CSU, UC
These ensembles rehearse and perform literature written for combinations of woodwinds in choirs of like instruments (all flutes, or clarinets, or saxophones) and mixed instruments. The ensembles include trios, quartets, quintets and larger ensembles, and may be combined with non-woodwind instruments to complete the instrumentation appropriate to the selected literature. Performances are held on campus and in the community.
Note: Letter grade or P/NP option.

Music 61abcd
Brass Ensembles
1 unit; 2 hours lecture
Enrollment Limitation: audition (previous band or orchestra experience or ability to perform music of moderate difficulty on a standard brass instrument)
Credit, degree applicable
Transfer CSU, UC
These ensembles rehearse and perform literature written for combinations of brass instruments. The ensembles include trios, quartets, quintets and larger ensembles, and may be combined with non-brass instruments to complete the instrumentation appropriate to the selected literature. Performances are held on campus and in the community.
Note: Letter grade or P/NP option.

Music 62abcd
Percussion Ensembles
1 unit; 2 hours lecture
Recommended Preparation: previous band or ensemble experience or ability to perform music of moderate difficulty on percussion instruments
Credit, degree applicable
Transfer CSU, UC
These ensembles rehearse and perform literature written for combinations of melody and/or rhythm percussion instruments. The ensembles include trios, quartets, quintets and larger ensembles, and may be combined with wind or string instruments to complete the instrumentation appropriate to the selected literature. Performances are held on campus and in the community.
Note: Letter grade or P/NP option.

Music 63abcd
String Ensembles
1 unit; 2 hours lecture
Enrollment Limitation: audition (previous orchestra or ensemble experience or ability to perform music of moderate difficulty on a standard string instrument)
Credit, degree applicable
Transfer CSU, UC
These ensembles rehearse and perform literature written for combinations of string instruments. The ensembles include trios, quartets, quintets and larger ensembles, and may be combined with non-string instruments to complete the instrumentation appropriate to the selected literature. Performances are held on campus and in the community.
Note: Letter grade or P/NP option.

Music 64abcd
Symphonic Band
1.5 units; 3 hours lecture
Enrollment Limitation: some high school band or orchestra experience or ability to perform music of moderate difficulty on standard band instrument
Credit, degree applicable
Transfer CSU, UC
This ensemble studies and performs compositions of moderate difficulty from the standard wind band repertoire. Emphasis is placed on stylistic and historical performance practices, playing techniques, and musicianship. Concerts are performed on and off campus.
Note: Letter grade or P/NP option.

Music 65abcd
College Community Band
1.5 units; 3 hours lecture
Enrollment Limitation: previous band or orchestra experience or ability to perform music of moderate difficulty on standard band instrument
Credit, degree applicable
Transfer CSU, UC
This ensemble rehearses and performs traditional, contemporary and popular band literature representing diverse styles and genres. Emphasis is placed on playing technique and musicianship. Performances are held on campus and in the community.
Note: Letter grade or P/NP option.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Music 67abcd
Big Band Jazz
1.5 units; 3 hours lecture
Enrollment Limitation: audition at the first class meeting (ability to perform music of moderate difficulty on a standard jazz instrument)
Credit, degree applicable
Transfer CSU, UC
This ensemble rehearses and performs commercial big band music from the swing era. The literature includes works by composers such as Ellington, Basie, and Kenton, as well as opportunities for vocal jazz soloists. Emphasis is placed on section development, extended solos, and improvisation. Performances are held on campus and in the community.
Note: Letter grade or P/NP option.

Music 68abcd
Jazz Band
1.5 units; 3 hours lecture
Enrollment Limitation: audition at the first class meeting (ability to perform music of moderate difficulty on a standard jazz instrument)
Credit, degree applicable
Transfer CSU, UC
This ensemble studies and performs a variety of music from the swing era to contemporary jazz written for the large standard jazz band instrumentation. Emphasis is placed on section development, improvisation, extended solos, and literature that is original and of increasing difficulty. Performances include campus concerts as well as at local schools and in jazz festivals.
Note: Letter grade or P/NP option.

Music 69abcd
College Community Jazz Band
1.5 units; 3 hours lecture
Enrollment Limitation: audition at the first class meeting (ability to perform music of moderate difficulty on a standard jazz instrument)
Credit, degree applicable
Transfer CSU, UC
This ensemble rehearses and performs literature for large jazz band ensemble. Emphasis is placed on section development, improvisation, and extended solos in a variety of styles from swing to contemporary jazz. Performances are held on and off campus.
Note: Letter grade or P/NP option.

Music 70abcd
Symphony Orchestra
1.5 units; 3 hours lecture
Enrollment Limitation: audition at the first class meeting (ability to perform music of moderate difficulty on a standard orchestral instrument)
Credit, degree applicable
Transfer CSU, UC
This ensemble rehearses and performs classics from the standard symphony orchestra repertoire. Emphasis is placed on stylistic and historical performance practices, playing techniques, and musicianship. Literature includes works for string and full orchestras, as well as solo and choral accompanying, Concerts are performed on and off campus.
Note: Letter grade or P/NP option.

Music 71abcd
Chamber Orchestra
1.5 units; 3 hours lecture
Enrollment Limitation: audition at the first class meeting (ability to perform music of moderate difficulty on a standard orchestral instrument)
Credit, degree applicable
Transfer CSU, UC
This ensemble studies and performs works for string, chamber, and full orchestra with an emphasis on stylistic and historical performance practices, playing technique, and musicianship. Literature includes works for string and full orchestra as well as solo accompaniment. Performances are held on campus and in the community.
Note: Letter grade or P/NP option.

Music 72abcd
College Community Orchestra
1.5 units; 3 hours lecture
Enrollment Limitation: audition at the first class meeting (ability to perform music of moderate difficulty on a standard orchestral instrument)
Credit, degree applicable
Transfer CSU, UC
This ensemble studies and performs compositions from the standard and popular orchestral repertoire. Emphasis is placed on stylistic and historical performance practices, playing techniques, and musicianship. Literature includes works for full orchestra as well as solo accompanying. Concerts are performed on and off campus.
Note: Letter grade or P/NP option.

Music 76abcd
Clarinet Choir
1 unit; 2 hours lecture
Enrollment Limitation: ability to perform music of moderate difficulty on an instrument of the clarinet family
Credit, degree applicable
Transfer CSU, UC
This ensemble rehearses and performs literature scored for the balanced clarinet choir. Performances are held on campus and in the community.

Music 79abcd
Varsity Band
1.5 units; minimum 54 hours lecture per semester to be arranged
Enrollment Limitation: audition at the first class meeting (ability to perform music of moderate difficulty on a standard band instrument)
Credit, degree applicable
*Transfer CSU, UC**
The varsity band prepares and performs music for athletic events and other selected college and community events.
Note: Letter grade or P/NP option.

Music 80abc
(formerly 80)
Fundamentals of Electronic Music
2 units; 1 hour lecture, 2 hours lab
Credit, degree applicable
Transfer CSU
This course provides instruction in the use of synthesizers, Musical Instrument Digital Interface (MIDI), computers, musical acoustics, sound design, and music software. Emphasis is placed on technical, compositional, and performance skills utilizing digital synthesizers in conjunction with computers and music software.

Music 81A
Introduction to Electronic Music Studio
2 units; 1 hour lecture, 2 hours lab
Credit, degree applicable
Transfer CSU
In this course students are introduced to audio recording, live sound reinforcement, signal processors, microphones, reference monitors, room acoustics, Musical Instrument Digital Interface (MIDI), computers, synthesizers, and software. Emphasis is placed on the technical and creative utilization of audio equipment in conjunction with the production of audio recordings and live sound reinforcement.

Music 81B
Electronic Music Studio
2 units; 1 hour lecture, 2 hours lab
Prerequisite: Music 81A with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course is a continuation of Music 81A. It further explores the use of synthesizers, computer programs and recording equipment.

Music 82abc
Digital Audio Recording for Commercial Music
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Music 81A with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course provides instruction on the functions and operations of digital music audio recording software such as Pro Tools. Emphasis is placed on recording, editing, and mixing digital audio in both Macintosh and PC computer environments.

Music 83abcd
Keyboarding for Commercial Music
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: Music 1
Credit, degree applicable
Transfer CSU
This course is designed for students who plan to use the piano keyboard as a song writing and music theory tool. Students will acquire a basic knowledge of intervals, chords, melodic voicing, and chord progressions used in the construction of commercial songs and in music arranging. Techniques in transcription and re-harmonization are also included.

Music 84
Commercial Music Business Studies
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
In this course students will examine the major components of the music industry. Topics will include publishing, copyrights, and recording/production contracts. Students will analyze industry trends, develop a comprehensive business plan, and explore job opportunities within the industry.

Music 85ab
Songwriting for Commercial Music
3 units; 2 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU
In this course students will develop and improve their ability to write songs, lyrics, and melodies through analysis and application of techniques used by professional songwriters. Students will be introduced to contemporary music technology and an overview of the music business as they pertain to songwriting.

Music 90abcd
Intermediate Applied Music/ Private Lessons
1 unit; 1 hour lecture, 6 hours lab to be arranged
Prerequisite: four semesters of Music 23abcd with a minimum grade of C
Corequisite: large ensemble class at El Camino College
Credit, degree applicable
Transfer CSU, UC
This is a workshop recital class which includes a private one hour lesson per week for the continuing Applied Music student. The student is required to practice on campus a minimum of five hours per week, to enroll in and participate in a large performing music ensemble class at El Camino College, and to attend selected musical events offered by the El Camino College Center for the Arts. Selected students may perform in public recital and occasional master classes.

Music 96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Music field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Music 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Music with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides special advanced studies in a subject field of music not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned music projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Music 501
The Joy of Music
0 units; maximum 20 hours lecture per semester;
maximum 15 hour lab per semester
Non-credit
This open entry/open exit course is repeatable and designed for older adults. It prepares students to attend selected concert events. Developed as part of the College's Music Appreciation Program, Joy of Music focuses on music, composers, performers, and music listening skills presented through lectures, video materials, and recorded examples. Emphasis is placed on folk, popular, ethnic, and Western art music. Joy of Music lectures are given at a variety of South Bay Senior Centers and at El Camino College.
Note: Students must attend pre-concert lectures in order to qualify for attendance at performance events.

Music 555
Community Choir for the Older Adult
0 units; 3 hours lab
Non-credit
This ensemble for the older adult rehearses and performs traditional and contemporary compositions from the standard choral literature. Emphasis is placed on stylistic and historical performance practices, choral techniques, and musicianship. Performances are combined with the College Community Choir and are held on campus and in the community.

The hours per week of courses may be adjusted based on the length of the term.

Music 560

Woodwind Ensembles for the Older Adult

0 units; 2 hours lab (maximum of 36 hours per semester)
Enrollment Limitation: audition (previous band or orchestra experience or ability to perform music of moderate difficulty on a standard orchestral woodwind instrument)
Non-credit

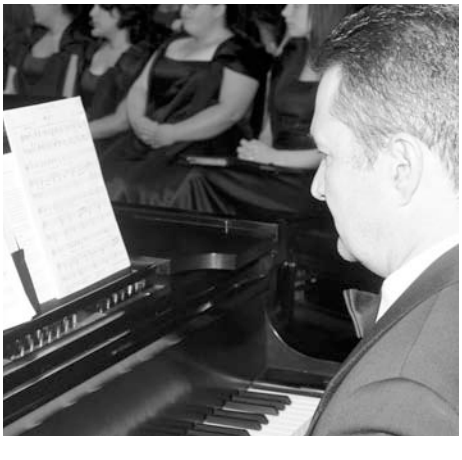
These ensembles for the older adult rehearse and perform literature written for combinations of woodwinds in choirs of like instruments (all flutes or clarinets or saxophones) and mixed instruments. The ensembles include trios, quartets, quintets, and larger ensembles and may be combined with non-woodwind instruments to complete the instrumentation appropriate to the selected literature. Emphasis is placed on stylistic and historical performance practices, instrumental techniques, and musicianship. Performances are held on campus and in the community.

Music 561

Brass Ensembles for the Older Adult

0 units; 2 hours lab (maximum of 36 hours per semester)
Enrollment Limitation: audition (previous band or orchestra experience or ability to perform music of moderate difficulty on a standard orchestral brass instrument)
Non-credit

These ensembles for the older adult rehearse and perform literature written for combinations of brass instruments. The ensembles include trios, quartets, quintets, and larger ensembles and may be combined with non-brass instruments to complete the instrumentation appropriate to the selected literature. Emphasis is placed on stylistic and historical performance practices, instrumental techniques, and musicianship. Performances are held on campus and in the community.



Music 562

Percussion Ensembles for the Older Adult

0 units; 2 hours lab (maximum of 36 hours per semester)
Enrollment Limitation: audition (previous band or ensemble experience or ability to perform music of moderate difficulty on percussion instruments)
Non-credit

These ensembles for the older adult rehearse and perform literature written for combinations of melody and/or rhythm percussion instruments. The ensembles include quartets, quintets, sextets, and larger ensembles and may be combined with wind or string instruments to complete the instrumentation appropriate to the selected literature. Emphasis is placed on instrumental techniques, improvisation, and musicianship. Performances are held on campus and in the community.

Music 563

String Ensembles for the Older Adult

0 units; 2 hours lab (maximum of 36 hours per semester)
Enrollment Limitation: audition (previous band or orchestra experience or ability to perform music of moderate difficulty on a standard orchestral string instrument)
Non-credit

These ensembles for the older adult rehearse and perform literature written for combinations of string instruments. The ensembles include trios, quartets, quintets, and larger ensembles and may be combined with non-string instruments to complete the instrumentation appropriate to the selected literature. Emphasis is placed on stylistic and historical performance practices, instrumental techniques, and musicianship. Performances are held on campus and in the community.

Music 565

Community Band for the Older Adult

0 units; 3 hours lab
Enrollment Limitation: previous band or orchestra experience or ability to perform music of moderate difficulty on a standard band instrument
Non-credit

This ensemble for the older adult rehearses and performs traditional and contemporary compositions from the standard wind band literature. Emphasis is placed on stylistic and historical performance practices, instrumental techniques, and musicianship. Performances are combined with the College Community Band and are held on campus and in the community.

Music 567

Jazz Band for the Older Adult

0 units; 3 hours lab (maximum of 54 hours per semester)
Enrollment Limitation: audition (ability to perform music of moderate difficulty on a standard jazz instrument)
Non-credit

This ensemble for the older adult rehearses and performs traditional and contemporary jazz compositions. The literature includes works by composers such as Basie, Ellington, and Nestico, as well as opportunities for vocal jazz soloists. Emphasis is placed on section development, extended solos, and improvisation. Performances are combined with the Jazz Band or Big Band Jazz and are held on campus and in the community.

Music 570

Orchestra for the Older Adult

0 units; 3 hours lab
Enrollment Limitation: audition; previous band or orchestra experience or ability to perform music of moderate difficulty on a standard orchestral instrument
Non-credit

This ensemble for the older adult rehearses and performs classics from the standard symphony orchestra literature including works for string and full ensembles. Emphasis is placed on stylistic and historical performance practices, instrumental techniques, and musicianship. Performances are combined with the Symphony Orchestra and are held on campus and in the community.

Music 576

Clarinet Choir for the Older Adult

0 units; 2 hours lab (maximum of 36 hours per semester)
Enrollment Limitation: audition (ability to perform music of moderate difficulty on a n instrument of the clarinet family)
Non-credit

This ensemble for the older adult rehearses and performs literature scored for the balanced clarinet choir. Emphasis is placed on stylistic performance practices, instrumental techniques, and musicianship. Performances and are held on campus and in the community.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Nursing

Nursing 48ab
Calculating Drugs and Solutions
1 unit; 1 hour lecture
Prerequisite: eligibility for Mathematics 70
Credit, degree applicable
Transfer CSU

This course reviews the mathematics needed in computing correct and safe medication dosages. The student will use concepts of higher mathematics to gain knowledge of techniques for calculating drug dosage. Problem solving, application of algebraic concepts, formulas, proportional relationships, systems of measurement, and measurement system conversions will be included. Proficiency in the use of the metric system will be emphasized.

Nursing 50
Special Topics in Nursing
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course

This course is designed to explore topics in Nursing more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Nursing 95/96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Prerequisite: Nursing 150 with a minimum grade of C or equivalent or completion of or current enrollment in the El Camino College Nursing Program
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply

Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Nursing field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.

Note: The total units earned for CWEE may not exceed 16 units.

Nursing – A.S. Degree Registered Nursing

(Health Sciences and Athletics Division)

This degree provides the student with the skills to utilize the nursing process and assess unique clients of any age in terms of their basic human needs and structural variables. Degree competence will be assessed regularly by evaluations of expected learning outcomes in the clinical setting as well as course examinations. Emphasis is placed on the use of critical thinking and creative problem solving in the clinical setting. The nursing major prepares graduates to manage and provide skilled nursing care to individuals in a variety of health care settings as entry-level registered nurses. Upon successful completion of the nursing program, the graduate is eligible to take the NCLEX-RN (National Council Licensure Examination for Registered Nurses). Program assessment is conducted by monitoring student success rates on the NCLEX-RN exam.

Program Length and Licensing Requirements:
The program is two academic years in length after completion of program prerequisites. Acceptance of qualified applicants to the program does not guarantee graduation from the program/college. A comprehensive exit examination is required of all students completing the nursing program. Students take this exam during Nursing 255 and must achieve a statistically determined passing score prior to taking the NCLEX-RN examination. Students are eligible to take the licensing examination for registered nurses upon satisfactory completion of the nursing program. Graduates must pass the licensing examination (NCLEX-RN) in order to practice nursing in the state of California. The NCLEX-RN, developed by the National Council of State Boards of Nursing, is administered by computer nationally throughout the year. The nursing program at El Camino College is approved by the California Board of Registered Nursing and is accredited by the National League for Nursing Accrediting Commission (NLNAC), 61 Broadway, New York, NY 10006, (212) 363-5555, extension 153.

Special Note Regarding Licensure:
The California Board of Registered Nursing (BRN) protects the public by screening applicants for licensure in order to identify potentially unsafe practitioners. The BRN may deny applications for permanent licensure, interim permits and temporary licenses if the applicant has been found guilty of dishonesty; fraud or deceit; felony; child abuse; sex offender crimes; acts involving narcotics, dangerous drugs or devices; assault and/or battery; and other crimes. Applicants who have questions regarding limitations related to licensure should contact the California Board of Registered Nursing (916) 322-3350 or access its Web site at www.rn.ca.gov. It is the responsibility of the applicant to present sufficient evidence of rehabilitation. Applicants are advised to explore other career opportunities prior to investing substantial time in a nursing program if it appears that a prior serious act or conviction may jeopardize licensure.

Program Prerequisites
In addition to meeting El Camino College's requirements for admission, applicants must satisfy the program prerequisites listed below in order to be eligible for the Nursing Program.

- Attend a general orientation session for the prospective nursing students.
- Graduate from high school or earn acceptable scores on the G.E.D.
- Complete Mathematics 40 or 43 or higher level Mathematics course or pass the Mathematics Competency Test.
- Achieve a passing composite score on a nursing assessment/readiness test.
- Complete the following Nursing Program prerequisite courses with a minimum 2.5 GPA: Anatomy 30 or 32; English 1A, Microbiology 33, and Physiology 31. (Note: If a student earns only a grade of C in each of these prerequisite courses, then the 2.5 GPA requirement will not be met.)
- Earn a cumulative 2.5 GPA in all college work. In addition to meeting the above requirements, students must have official transcripts on file in the Records Office showing evidence of high school completion as well as all college and university credits earned. A student must also provide verification of criminal background clearance.

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Nursing 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: Two courses in Nursing with a minimum grade of C in each and acknowledgment by the instructor with whom the student will work.
Credit, degree applicable
Transfer CSU - limitations apply
This course provides advanced studies in a specialized nursing subject not covered in the regular departmental offerings. Regularly scheduled conferences with an instructor are coordinated with assigned laboratory work and/or research project (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Nursing 101
Exploring Health Occupation Careers
2 units; 2 hours lecture
Recommended Preparation: English 84
Credit, not degree applicable
This is an introductory course for students considering careers in health care. Students will explore career options and be introduced to the major job responsibilities and technical skill requirements of a variety of health care occupations. The information provided will enable students to match their abilities and interest to a specific health care occupation.

Nursing 103
Nurse Assistant
5 units; 3 hours lecture, 6 hours lab
Prerequisite: Physical examination including a negative tuberculin skin test or a clear chest x-ray
Recommended Preparation: English 84
Credit, not degree applicable
This course prepares the student to function as an entry-level worker on a health care team in a long-term care facility. Focus will be on preparing the student to provide direct care to the patient/resident; promote comfort measures; and collect, record and report data to licensed personnel. Principles of critical thinking, team building, ethics, caring and cultural sensitivity are integrated throughout the course. The student will be eligible for certification by the State of California as a nurse assistant upon satisfactory completion of this course and the State Competency Evaluation.

The hours per week of courses may be adjusted based on the length of the term.

Nursing

(Continued from previous page)

Other Information
1. Complete a Reading Assessment test with a passing score of 60 or greater. (If a student receives a score below 60, the student must complete remediation which includes Academic Strategies 1abcd).
2. Complete or have in progress Nursing 145. If Nursing 145 is in progress, the student must provide documentation of completion of the course to the Nursing Office by the end of the semester.
3. Contact the counseling center to schedule an appointment with a nursing counselor.
4. Students starting their first Nursing course at El Camino College must follow the guidelines in the Nursing Student Handbook and comply with all regulations.
5. After a student is admitted into the nursing program, a full-time load is considered 10 units per semester.

Wait List
If there are more applicants than places, a wait list will be generated. The date stamped on the application by the Admissions office on the Crenshaw campus or the Nursing department office on the Compton campus will determine the applicants place on the wait list. The earlier a student submits the completed application, the higher the student will be placed on the wait list. Students will not be advised of their wait list number. Please do not contact the nursing department office to make inquiries about waitlist status. Currently the wait time is 1-3 semesters. If a 2.5 cumulative GPA is maintained by the nursing applicant, eligibility continues while on the waiting list. The wait list does not guarantee a place in the program, it merely lists qualified applicants in the order their applications were received.

Required Program GPA
Nursing students must maintain a minimum overall GPA of 2.0 to continue in the nursing program, graduate and receive an Associate in Science degree. Nursing Assistant certification is highly desirable for entry into the nursing program.

Advanced Standing
Prospective students who have had prior education in nursing or other health-related areas may request consideration for entry into the nursing program with advanced placement. Applicants would include licensed Vocational/Practical Nurses, Licensed Psychiatric Technicians, and transfer students from accredited nursing programs. Specific information regarding the advanced placement procedure is available through the Counseling Center or the Nursing Department Office. Advanced standing applicants are admitted to the program on a space available basis. Upon request, transfer students' transcripts will be individually evaluated for granting credit.
Note: Licensed Vocational Nurses who apply for advanced standing will be required to provide documentary evident that they have been employed as a Licensed Vocational Nurse for a minimum of one year.

Program Readmission and Course Repetition
Students who leave the nursing program (self or faculty initiated) are eligible to be readmitted to the program subject to availability of space. Only one single nursing course, in which a student has received a D or F grade, may be repeated. The repeat and stop out policy is available for review in the Nursing Office and is published in the Student Handbook. Student academic standing at the time of leaving the program will determine whether academic support courses will be prescribed for completion before re-entry. Students not eligible to re-enter the program may individually appeal their re-entry status through the Acceptance, Transfer and Progression Committee.

El Camino College Major Requirements
Nursing 145, 150, 151, 152, 153, 154, 155, 156, 250, 251, 253, 254, 255. All general education courses and Nursing courses must be completed with a minimum grade of C.
(Credit may be granted to transfer students for coursework completed at an accredited nursing program.)
Total Units: 43.5

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Nursing 104
Home Health Aide
2 units; 1.5 hours lecture, 1.5 hours lab
Enrollment Limitation: Nurse Assistant Certificate required
Credit, not degree applicable
This course prepares the Certified Nurse Assistant (CNA) to apply for certification as a Home Health Aide. The student will be prepared to function as an entry-level worker on a health care team in a home health agency. The focus will be on providing direct and supportive care to the client, promoting comfort measures, and collecting, recording and reporting data in the home care setting. Principles of critical thinking, team building, ethics, caring and cultural sensitivity are integrated throughout the course. Upon completion of this course, the student will be eligible for certification by the State of California as a Home Health Aide.

Nursing 110
Introduction to the School and Community Health Paraprofessional
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
This course introduces students to the skills necessary to fulfill the roles and responsibilities of the health paraprofessional in caring for children in schools and the community. The course includes an overview of the legal and ethical responsibilities of the health paraprofessional as well as the basic concepts of anatomy, physiology, and wellness.

Nursing 112
Basic Health Care for Children
3 units; 3 hours lecture
Prerequisite: Nursing 110 with a minimum grade of C
Credit, degree applicable
This course introduces students to common conditions and treatments found in children. Content includes acute infections, chronic illnesses and conditions, psychosocial issues, triage, medication and treatment monitoring, specialized equipment usage, and communicable disease reporting.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Nursing

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Licensed Vocational Nurse (LVN) – Career Ladder – Two Options
Option I
Licensed Vocational Nurses are eligible to participate in the 30-Unit Option Non-Degree Track. Persons who desire to pursue the 30-Unit Non-Degree Track must complete a total of 30 units in Science and Nursing courses. The following courses are required in the 30-Unit Non-Degree Track: Microbiology 33 or equivalent, Nursing 149, 154, 251, 253, 254, and 255, Physiology 31 or equivalent. All courses must be completed with a grade of C or better. Individuals completing the 30-Unit Option Track are eligible to take the NCLEX-RN licensing exam but are not considered graduates of El Camino College's Associate Degree Nursing Program. The 30-Unit Option is a non-degree option and no degree is awarded by the college.

Option II
The Associate Degree Nursing Program is designed to recognize previous educational preparation and an Advanced Placement Degree Option is available for Licensed Vocational Nurses. This enables LVN's to enter the Associate Degree Nursing Program at an advanced level and earn an Associate in Science Degree in a shorter period of time. The Advanced Placement Option requires that a student take the following courses: all required general education courses for a A.S. Degree in Nursing and Nursing 149, 150, 151, 152, 153, 154, 155, 156, 250, 251, 253, 254, 255. All nursing courses may be challenged. Contact the Nursing Office for challenge procedures. Specific information on either of the above two options (30-Unit Option Track and the Advanced Placement Degree Track) is available in the Counseling Center and the Nursing Office. Potential applicants are advised to seek counseling from a nursing counselor to examine both choices prior to deciding on the track to pursue. Entry into both career tracks is on a space-available basis. Licensed Psychiatric Technicians will be granted credit for Nursing 154 by filing a petition in Admissions.

Associate Degree for the Diploma Graduate Option
This option, required by the Board of Registered Nursing, is designed for licensed diploma RNs. The option allows a licensed diploma RN to earn credit for previous educational preparation. Specific general education or science courses, selected on a case-by-case basis, must be completed to fulfill the requirements for the Associate in Science degree with a major in Nursing. Transcript evaluation will allow up to a maximum of 34 units of credit.

California State Licensure
All graduates of the Nursing Program are eligible to take the National Licensing Examination (NCLEX) and must pass the exam to practice in California. The California Board of Registered Nursing (BRN) requires that all students applying for the NCLEX be fingerprinted and submit a fingerprint card with the licensing examination application. The law provides for denial of licensure for crimes or misdemeanors which are substantially related to nursing qualifications, functions or duties. If the BRN determines that the denial of licensure is valid, it is the responsibility of the applicant to present sufficient evidence of rehabilitation. Applicants who have questions regarding limitations related to licensure should contact the California Board of Registered Nursing, (916) 322-3350 prior to entering the program.

Nursing 114
School Health Office and Information Management
2 units; 4 hours lecture
Prerequisite: Nursing 110 with a minimum grade of C
Credit, degree applicable
This course provides the student with the basic knowledge to set up and maintain the school health office and to manage and record health information on appropriate health databases. Topics also include disaster preparedness, the handling of biohazardous material, and mandated reporting. Students will have the opportunity to observe in a school health office.

Nursing – A.S. Vocational Nursing and Certificate of Achievement

Offered at the El Camino College Compton Center
(pending approval by the California Community Colleges System Office)
(Health Sciences and Athletics Division)

In the Vocational Nursing Program, students acquire the skills to function as first level licensed nurses (Licensed Vocational Nurses) providing nursing care for stable clients in a variety of long-term health care settings. Successful completers of the program are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN). Program completers must pass the NCLEX-PN examination and meet all other requirements of the state board of nursing in order to obtain a license to practice vocational nursing. Students who complete the Associate Degree requirements are prepared for more rapid advancement in vocational nursing and for further education in the nursing profession. Program assessment is conducted by monitoring student success rates on the NCLEX-PN examination.

Program Prerequisites
In addition to meeting El Camino College's requirements for admission, applicants must satisfy the program prerequisites listed below in order to be eligible for the Nursing Program.
- High school graduation or equivalent.
- Cumulative GPA 2.0 in all college work.
- Eligibility for English 1A.
- Eligibility for Mathematics 73 or Mathematics 80.
- Complete the following Vocational Nursing Program prerequisite courses: Anatomy 30, Nursing 103, 124, 151, and Nutrition and Foods 11.

Other Information
1. Have a minimum cumulative GPA of 2.5 in all college work completed since high school graduation.
2. Complete the Mathematics assessment test with eligibility for Math 40 or pass the Mathematics Competency examination.
3. Complete the Reading assessment test with eligibility for English 1A
4. Complete or have in progress Nursing 124. If Nursing 124 is in progress, the student must provide documentation of completion to the Nursing Office by the end of the semester
5. Transcripts: U.S. transcripts from all colleges attended since high school must be mailed directly to the El Camino College – Compton Community Educational Center (ECC – CCEC) Admissions Office. No hand carried transcripts will be accepted.
6. Contact the counseling center to schedule an appointment with a nursing counselor.
7. Students must sign up for a specific test date. Readiness Assessment Scores from other Nursing Schools will not be accepted. If a prospective student receives a score below the recommended score, the student will be required to complete remediation.

Note: No more than one repeat in the basic science prerequisite (Human Anatomy) will be allowed within 5 years of the application filing date.

Wait List
If there are more applicants than seats, a wait list will be generated. The date stamped on the application by the Nursing department office on the Compton campus will determine the applicants place on the wait list. The earlier a student submits their completed application, the higher the student will be on the wait list. Students will not be advised of their wait list number. Please do not contact the nursing department office to make inquiry regarding your waitlist status. If a 2.0 cumulative GPA is maintained by the nursing applicant, eligibility continues while on the waiting list. The wait list does not guarantee a place in the program, it merely lists qualified applicants in the order the applications was received.

Required Program GPA
Vocational Nursing students must maintain a minimum overall GPA of 2.0 to continue in the nursing program, graduate and receive a Certificate of Achievement.

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Nursing 116
Disabilities in the Developing Child
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU
In this course students will study childhood disabilities, the effects of these conditions on the child's development, and the overall impact on the family system. Topics will include typical and atypical development in the physical, cognitive, social, and emotional domains as well as the recognition, treatment, and care for children with disabling conditions. Students will also explore the role and responsibilities of the classroom special education assistant and the in-home respite care provider.
Note: This course is the same as Child Development 152.

Nursing 118
Respite Care for Children and Adolescents
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
This course introduces the student to the role and responsibilities involved in providing in-home respite care for the disabled child. Topics will include personal safety, community resources, legal parameters, ethical considerations, nutrition, physical positioning, activities, and procedures for home visits. Students will develop the skills necessary to organize and implement daily living activities in the client's home.

Nursing 124
Basic Concepts of Nursing Pharmacology
1 unit; 1 hour lecture
Prerequisite: Mathematics 23 with a minimum grade of C or qualification by testing (El Camino College Placement Test) and assessment
Recommended Preparation: Anatomy 30
Credit, degree applicable
This course provides instruction in the basic concepts and principles of pharmacology for beginning nursing students. Mastery of the measurement systems used in nursing and drug dosage calculations are required to complete the course successfully.
Note: Completion of this course is required prior to enrollment in the Vocational Nursing Program.

Nursing

(Continued from previous page)

Program Readmission and Course Repetition
Students who leave the nursing program (self or faculty initiated) are eligible to be readmitted to the program subject to availability of space. Nursing courses in which a student has received a D or F grade may be repeated one time. However, the total number of repeats and re-entries allowed are determined by program policy. This policy is available for review in the Nursing Office and is published in the Student Handbook. Student academic standing at the time of leaving the program will determine whether academic support courses will be prescribed for completion before re-entry. Students not eligible to re-enter the program may individually appeal their re-entry status through the Acceptance, Transfer and Progression Committee.

El Camino College Major Requirements
Nursing 125, 126, 127, 128, 129, 130, 131, 132, 133
Total Units: 37
The following courses must be completed at El Camino College: Nursing 130, 131, 132, 133
Total Units: 16
Other course requirements: English 1A, Psychology 5, Mathematics 73 or 80

Certificate of Achievement
A Certificate of Achievement will be granted to the student completing the requirements listed below.
Anatomy 30, Nursing 103, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 151, Nutrition and Foods 11
Total Units: 52
The following courses must be completed at El Camino College: Nursing 130, 131, 132, 133
Total Units: 16
Other requirements: High school graduation or equivalent, cumulative GPA of 2.0 in all college work, eligibility for English 1A, eligibility for Mathematics 73 or 80.

California State Licensure
All graduates of the Vocational Nursing Program are eligible to take the National Licensing Examination (NCLEX) and must pass the exam to practice in California. The California Board of Vocational Nursing and Psychiatric Technician (BVNPT) requires that all students applying for the (NCLEX) be fingerprinted and submit a Livescan fingerprint card with the licensing examination application. Finger printing applicants is one way of ensuring that vocational nurses are safe and competent practitioners.

The law provides for denial of licensure for crimes or misdemeanors which are substantially related to nursing qualifications, functions or duties. If the BVNPT determines that the denial of licensure is valid, it is the responsibility of the applicant to present sufficient evidence of rehabilitation. Applicants who have questions regarding limitations related to licensure should contact the California Board of Vocational Nursing and Psychiatric Technicians (BVNPT) (916) 263-7800.

Accreditation
The Nursing Program is approved by the California Board of Vocational Nursing and Psychiatric Technicians (BVNPT) the mailing address: 2535 Capitol Oaks Drive Suite 205, Sacramento, CA 95833.

Nursing 125
Beginning Vocational Nursing
7 units; 3.5 hours lecture, 10.5 hours lab
Enrollment Limitation: Admission to the Vocational Nursing Program
Credit, degree applicable
This course provides the instruction and clinical practice required for beginning vocational nursing students. The concepts of Byrne and Thompson's basic human needs theory of nursing and the nursing process are studied and are utilized to provide nursing care for elderly and stable clients in long-term care facilities. Theory and related nursing practice will focus on physical integrity and activity-rest needs.

Nursing 126
Intermediate Vocational Nursing
7 units; 3.5 hours lecture, 10.5 hours lab
Prerequisite: Nursing 125 with a minimum grade of C
Credit, degree applicable
This course provides instruction and clinical practice at the intermediate level of vocational nursing. Concepts of Byrne and Thompson's basic human needs theory and the nursing process are applied to provide nursing care for clients during the preoperative period. Theory and related nursing practice focus on common problems associated with the basic human needs of activity-rest, ingestive, excretory, and oxygen-carbon dioxide exchange needs.

Nursing 127
Pharmacology for Vocational Nurses
2 units; 2 hours lecture
Prerequisite: Nursing 124 with a minimum grade of C
Credit, degree applicable
This course provides instruction in clinical drug therapy for vocational nurses. Students study commonly used drugs organized into classifications based upon body systems and pharmacological action. The focus of the course is nursing responsibilities regarding the administration of each class of drugs.
Note: This course, together with Nursing 124, meets the 54-hour pharmacology content requirements of the Board of Vocational Nursing and Psychiatric Technicians.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Nursing 128
Maternal Infant Vocational Nursing
2.5 units; 1.5 hours lecture, 3 hours lab
Prerequisite: Nursing 126 with a minimum grade of C
Enrollment Limitation: admission to the Vocational Nursing Program
Credit, degree applicable
This course provides instruction and clinical practice in nursing care related to the normal developmental phases and most common problems of the childbearing family. Byrne and Thompson's theory of nursing and the nursing process serve as frameworks to analyze and plan for normal childbearing experiences.

Nursing 129
The Childrearing Family for Vocational Nurses
2.5 units; 1.5 hours lecture, 3 hours lab
Prerequisite: Nursing 126 with a minimum grade of C
Enrollment Limitation: admission to the Vocational Nursing Program
Credit, degree applicable
This course provides instruction and clinical practice in nursing care related to the normal developmental phases and most common problems of the childrearing family. Byrne and Thompson's theory of nursing and the nursing process serve as frameworks to analyze and plan nursing promotion of normal childhood health and development. Clinical practice sites include ambulatory care clinics and community agencies.

Nursing 130
Advanced Vocational Nursing I
7 units; 3.5 hours lecture, 10.5 hours lab
Prerequisite: Nursing 129 with a minimum grade of C
Enrollment Limitation: admission to the Vocational Nursing Program
Credit, degree applicable
This course provides instruction and clinical practice in advanced vocational nursing. Byrne and Thompson's basic human needs theory of nursing and the nursing process are integrated and applied to assist clients with problems associated with physical integrity needs, affiliative and sexual needs, mental health problems and other common related issues. Clinical practice sites include in-patient, out-patient, and community based health care agencies.

Nursing 131
Professional Issues for Vocational Nurses
1 unit; 1 hour lecture
Prerequisite: Nursing 126 with a minimum grade of C
Enrollment Limitation: admission to the Vocational Nursing Program
Credit, degree applicable
This course provides instruction in ethical and legal issues as well as regulatory and policy standards regarding the practice of vocational nursing in California. Career opportunities in nursing will be explored for employment as a Licensed Vocational Nurse.
Note: Pass/no pass only

Nursing 132
Advanced Vocational Nursing II
7 units; 3.5 hours lecture, 10.5 hours lab
Prerequisite: Nursing 130 with a minimum grade of C
Enrollment Limitation: admission to the Vocational Nursing Program
Credit, degree applicable
This course provides instruction and clinical practice in leadership within the vocational nursing scope of practice. Content includes nursing theory and the leadership and management skills needed to care for groups of stable patients with complex health care needs. Practice sites include long-term care facilities, ambulatory care facilities, and other community health care agencies.

Nursing 133
Transition to Licensed Vocational Nursing
1 unit; 1 hour lecture
Prerequisite: Nursing 131 with a minimum grade of C
Enrollment Limitation: admission to the Vocational Nursing Program
Credit, degree applicable
This course provides instruction and support for the student who will complete the program and transition into the Licensed Vocational Nurse role. Legal and practical aspects of obtaining a license in California will be studied. Issues of importance to the beginning nurse, such as supervision, delegation and management of nursing care will be emphasized.
Note: Pass/no pass only

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Nursing 145
(formerly 49)
Introduction to Nursing
2 units; 2 hours lecture
Prerequisite: eligibility for English 1A and Mathematics 80
Credit, degree applicable
Transfer CSU
This introductory course examines the nurse's role in hospital and outpatient settings. Through case studies, students will apply and evaluate the impact of the nursing process on clients' health conditions. Specific emphasis is placed on application of the nursing process, critical thinking, therapeutic communication, cultural variation, and computational skills. Students undergo assessment of their individual learning needs and identify campus resources that will assist them in meeting these learning needs.

Nursing 149
Preparation for Advanced Placement in Nursing
2 units; 1.5 hours lecture, 1.5 hours lab
Enrollment Limitation: admission to the Nursing Program
Credit, degree applicable
Transfer CSU
This course acquaints Licensed Vocational/Practical Nurses (LVN/LPN), Licensed Psychiatric Technicians (LPT), and transfer students from accredited nursing programs to concepts of nursing as they apply to the El Camino College nursing program. Students will become familiar with the program philosophy, basic needs theory, nursing process, critical thinking, and communication. Course discussion will focus on transition to the registered nursing role and the impact of legal and ethical boundaries on health care delivery. Students will practice basic nursing skills and demonstrate competency.

Nursing 150
Beginning Nursing Process and Fundamental Skills
7.5 units; 4 hours lecture, 10.5 hours lab
Enrollment Limitation: admission to the Nursing Program
Credit, degree applicable
Transfer CSU
The knowledge and skills necessary to study nursing and nursing's effect on the individual are presented. The concepts of basic human needs and structural variables such as age, sex, and ethnicity are studied. The nursing process is introduced with emphasis on assessment in the geriatric population. Fundamental skills, such as medication administration, are introduced in the lab and practiced in a clinical setting.

Nursing 151
(formerly 61)
Human Development and Health
2 units; 2 hours lecture
Enrollment Limitation: admission to the Nursing Program
Credit, degree applicable
Transfer CSU
This course focuses on the various factors that affect human development from conception through death. Normal biopsychosocial development is emphasized and commonly occurring deviations are examined and analyzed. The course also focuses on health problems and concerns unique to each stage of growth and development. The nurse's role in analyzing problems and providing care throughout the life span is explored.

Nursing 152
(formerly 66A)
Introduction to Nursing Pharmacology
1 unit; 1 hour lecture
Enrollment Limitation: admission to the Nursing Program
Credit, degree applicable
Transfer CSU
This course is an introduction to clinical drug therapy. Major content areas include fundamental concepts of pharmacology; groups of therapeutic drugs; prototypes of drug groups; commonly prescribed individual drugs; interrelationships between body systems and drugs; and the role of the nursing process in prescribed drug therapy regimens. Legal and ethical implications will be examined.

Nursing 153
(formerly 63)
Intermediate Nursing Process I
4.5 units; 2 hours lecture, 7.5 hours lab
Prerequisite: Nursing 150, Nursing 151, and Nursing 152 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This course will assist the student in meeting the needs of adult clients with moderately severe disruptions to health. Theory and utilization of the nursing process will focus on pathophysiological problems associated with the pre-operative and post-operative periods. Students will examine problems associated with the physical integrity, respiratory, activity-rest, ingestive, excretory, and sexual needs.

The hours per week of courses may be adjusted based on the length of the term.

Nursing 154
(formerly 62)
Intermediate Nursing Process and Mental Health
4 units; 2 hours lecture, 6 hours lab
Prerequisite: Nursing 150, Nursing 151, and Nursing 152 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
In this course, students will utilize the nursing process in caring for clients with varying degrees of mental health problems. Psychopharmacological therapies will be examined. Students will apply techniques of therapeutic communication, administer medications, and assume a leadership role in the clinical setting. In addition, students will utilize and maintain legal and ethical standards specific to mental health clients.

Nursing 155
Health Assessment
1 unit; 0.5 hour lecture, 1.5 hours lab
Prerequisite: Nursing 150, Nursing 151, and Nursing 152 with a minimum grade of C in each prerequisite course
Credit, degree applicable
Transfer CSU
In this course students will develop and practice health assessment skills. The focus will be on gathering data for health histories and performing physical assessments on the cardiac, respiratory, peripheral vascular, abdominal, musculoskeletal, lymphatic, head, eyes, ears, nose, and throat (HEENT), and neurological systems. Students will compare and contrast the pathophysiologies of normal and abnormal assessments and document their findings.

Nursing 156
(formerly 66B)
Advanced Nursing Pharmacology
1 unit; 1 hour lecture
Prerequisite: Nursing 150, Nursing 151, and Nursing 152 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This course offers an in-depth study of clinical drug therapy. The knowledge and intervention needed to maximize therapeutic effects and prevent or minimize adverse effects of drugs will be emphasized. Major content areas will include advanced pharmacological principles; major drug classifications; selected individual drugs; drug effects on body tissues; human responses to drug therapy; and application of the nursing process. Anatomy, physiology, and microbiology concepts are correlated with various pathologies, emphasizing the effect(s) of drug therapy on body systems. Health teaching and legal and ethical issues are examined.

Nursing 210
Implications of Pathophysiology Concepts for Nurses
2 units; 2 hours lecture
Prerequisite: Nursing 153 with a minimum grade of C or equivalent or Licensed Registered Nurse or Vocational Nurse
Credit, degree applicable
Transfer CSU
In this course, the student will explore the effect of illness on the human body. Common disorders of the major body systems are used to illustrate the effect of diseases on the body. Clinical applications of the concepts of pathophysiology will assist the nurse in providing effective, scientifically based patient care.

Nursing 212
Basic Perioperative Nursing
13 units; 9 hours lecture, 19.5 hours lab (15 weeks course)
Enrollment Limitation: Licensed Registered Nurse
Credit, not degree applicable
This course is designed for registered nurses who have had no previous experience in the operating room. Upon completion of the course, the nurse will be qualified to practice at an entry-level perioperative position in an acute care hospital or an outpatient surgicenter. Course content includes care of the perioperative patient during all phases of the operative experience. Emphasis will be placed on those functions required during the intraoperative phase, including the functions of a scrub and circulating nurse during general surgical procedures.

Nursing 214
Specialized Nursing Skills: Transition to Employment
3 units; 4 hours lecture, 2.5 hours lab (12 weeks course)
Enrollment Limitation: fourth Semester Nursing Student, Graduate Nurse, Licensed Vocational Nurse or Licensed Registered Nurse
Credit, not degree applicable
This course provides the advanced technical skills necessary for increasing employment opportunities in nursing and for periodic recertification of competency. Emphasis will be placed on advanced resuscitation skills in Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), and Basic Electrocardiogram Interpretation. The management of chemotherapy agents, as specified by the Oncology Nursing Society, will also be covered. Students will have the opportunity to take certification examinations following specific content areas.
Note: Letter grade or P/NP option.
Note: This course is repeatable.

Nursing 216
Emergency Room Nursing
11.5 units; 4.5 hours lecture, 24 hours lab (16 weeks course)
Enrollment Limitation: Registered Nurse with current Basic Cardiac Life Support (BCLS), Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), and Neonatal Resuscitation certificates and documentation of Basic Electrocardiogram (EKG) Interpretation Skills
Credit, not degree applicable
This course is designed for the registered nurse who desires to work in the emergency room. The course will include the major problems, diagnoses and legal/ethical issues encountered with the emergency room patient. Course content follows the educational guidelines established by the Emergency Nurse Association.

Nursing 218
Critical Care Nursing
16 units; 7 hours lecture, 27 hours lab
Recommended Preparation: current Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS) certification
Enrollment Limitation: Registered Nurse; one year of experience in a Medical-Surgical Acute Care setting or equivalent
Credit, degree applicable
This course is designed to prepare the registered nurse for an entry-level position in an Intensive Care Unit (ICU) within an acute care hospital. Course content will include an introduction to the critical care environment and legal/ethical issues. The student will discuss cardiovascular, respiratory, renal, genitourinary, neurological, gastrointestinal, endocrine, and hematological patient situations as well as patients with multi-system failures. Students will be assigned to intensive care units for clinical application of learned skills. The educational guidelines established by the American Association of Critical Nurses will be followed.

Nursing 250
Intermediate Nursing Process and the Family
5.5 units; 3 hours lecture, 7.5 hours lab
Prerequisite: Nursing 153, Nursing 154, Nursing 155, and Nursing 156 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This course focuses on the theory and clinical application of concepts related to the nursing care of families in the childbearing and childrearing stages. Using the nursing process, students will apply the El Camino College Nursing Program's theoretical framework to meet the basic needs of families as they move through the life stages of pregnancy, birth, and childhood. The importance of structural variables, physical assessment skills specific to maternal-child nursing, and pathological conditions that occur during childbirth, infancy, childhood, and adolescence will be emphasized.

Nursing 251
(formerly 67)
Legal and Ethical Considerations in Nursing
1 unit; 1 hour lecture
Prerequisite: Nursing 150 and Nursing 151 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
In this course students will analyze the legal responsibilities associated with the scope of nursing practice as defined by the Board of Registered Nursing. Other parameters and standards of law impacting the nursing profession will be examined. Scenarios that pose ethical dilemmas for the registered nurse will be debated using ethical theories and principles.

Nursing 253
Intermediate Nursing Process II
4.5 units; 2 hours lecture, 7.5 hours lab
Prerequisite: Nursing 153, Nursing 154, Nursing 155, and Nursing 156 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This course will assist the student in meeting the needs of clients with complicated disease states. The synthesis and integration of multiple assessment data in order to utilize the nursing process in caring for medical-surgical clients will be emphasized. Organization and prioritizing care for multiple clients will be stressed in the delivery of total patient care. Increased skill development of nursing procedures and collaborative nursing interventions will be emphasized in the clinical setting. Topics will include pain management, hematology, immunology, infectious diseases, oncology, palliation, and neurological dysfunctions.

Nursing 254
Advanced Nursing Process I
7 units; 3 hours lecture, 12 hours lab
Prerequisite: Nursing 250, Nursing 251, and Nursing 253 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This course focuses on pathophysiologic concepts and nursing management essential to critical care and emergency nursing. Clients with acute and chronic cardiopulmonary, hepatic, renal, and multi-system failure will be selected for critical care clinical experiences. Leadership and management skills are introduced and applied in the clinical setting. Students apply the nursing process and prioritize nursing care for a group of clients with multiple need imbalances. The role of the nurse in the management of client care following a disaster is presented.

Nursing 255
Advanced Nursing Process II – Clinical Preceptorship
2.5 units; 135 hours of lab to be arranged over four weeks
Prerequisite: Nursing 254 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course will provide a clinical preceptorship experience for the advanced student nurse and the inactive Registered Nurse (RN) as well as the foreign Registered Nurse (RN) in transition. The student works under the supervision of a clinical nurse preceptor. This experience assists the student to make a smooth transition from the learner role to the entry level Registered Nurse role in a realistic clinical setting. Opportunities will be provided to implement leadership and management skills as well as decision making and priority setting utilizing legal and ethical principles.

Nutrition and Foods

Nutrition and Foods 3
Nutrition and Foods Introduction to Macintosh
1 unit;0.5 hour lecture, 1.5 hours lab
Credit, degree applicable
Transfer CSU
The student is introduced to the basic operation of the Macintosh computer. The software learned in this course will be reinforced in Nutrition and Foods for project assignments.
Note: Same as Family and Consumer Studies 3, Fashion 3, Interior Design 3.

Nutrition and Foods 11
Nutrition
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to the basic principles of nutrition as they relate to the health and physical wellness of individuals. The topics covered include nutrition throughout the life cycle, dietary analysis, current nutrition trends, food safety, and physical fitness.

Nutrition and Foods 15
Nutrition for Infants and Young Children
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course students will study the nutritional needs in the growth and development of infants and young children. Topics include nutritional assessment, food safety, government resources, menu planning, and integrating nutrition education into early childhood education programs.

Nutrition and Foods 50
Special Topics in Nutrition and Foods
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Nutrition and Foods more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Nutrition and Foods 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Nutrition and Foods courses with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Nutrition and Foods not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Nutrition and Foods projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Oceanography

Oceanography 10
Introduction to Oceanography
4 units; 3 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This introductory course in oceanography presents the ocean in terms of its physical, chemical and biological environments. The topics include studies of: formation and modification of various wave types; tidal behavior; formation of water masses and ocean currents; beaches and the changing shoreline; coral reefs; physical and chemical properties of ocean water; marine environments; marine sediments; origin of sea floor and coastline features; the spreading sea floor and drifting continents.

Oceanography 50
Special Topics in Oceanography
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Oceanography more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Optometry
See Pre-Optometry

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Paralegal Studies – A.A. Degree and Certificate of Achievement

(Business Division)

This program is approved by the American Bar Association.

The degree and certificate are designed to train students to assist lawyers in private firms, legal departments of companies, or governmental agencies. The American Bar Association (ABA) required general education aids in transfer of the legal assistant student to a university. Upon successful completion of the program requirements, the student will have the ability to apply theories and principles of law, prepare or interpret legal documents, draft pleadings including court forms, prepare for litigation, apply legal ethics, case management techniques, and skills for client interaction, and research the law, including on-line legal research. Competency will be assessed regularly by examinations and projects.

El Camino College Major Requirements
Entrance to the program is gained by successful completion of Law 11, Introduction to Legal Research.
Paralegal Studies Major Requirements: Paralegal Studies 1; Law 4 or Law 5; Law 11, 16, 17, 19, 20; four courses from the following: Law 6, 12, 13, 14, 15, 18, 95abcd (3 or 4 units), Real Estate 12A
Total Units: 31-32
In-Residence Requirements: A total of 15 units of Legal Specialty courses including Law 11, 17, 20; and six additional units selected from Law 12, 13, 14, 15, 16, 18, or 19 must be taken at El Camino College for the degree.

The American Bar Association has specific course requirements for 18 units of general education. All students in this program must consult a counselor for courses that satisfy the 18 units of general education.

This program does not prepare students for law school or the practice of law. "No person shall practice law in this state unless he/she is an active member of the State Bar." Cal. Bus. & Prof. Code, Section 6125.

Certificate of Achievement
A certificate will be awarded to those possessing an Associate, Bachelor or higher degree or who will be completing a degree concurrently with the certificate requirements. Students may earn this certificate by completing the major courses with a B average or better. Prerequisite: entrance to the program is gained by successful completion of Law 11, Introduction to Legal Research.
Paralegal Studies Certificate Requirements: Paralegal Studies 1; Law 4 or Law 5; Law 11, 16, 17, 19, 20; four courses from the following: Law 6, 12, 13, 14, 15, 18, Law 95abcd (3 or 4 units), Real Estate 12A
Total Units: 31-32
In-Residence Requirements: A total of 15 units of Legal Specialty courses including Law 11, 17, 20, and six additional units selected from Law 12, 13, 14, 15, 16, 18, or 19 must be taken at El Camino College for the certificate.

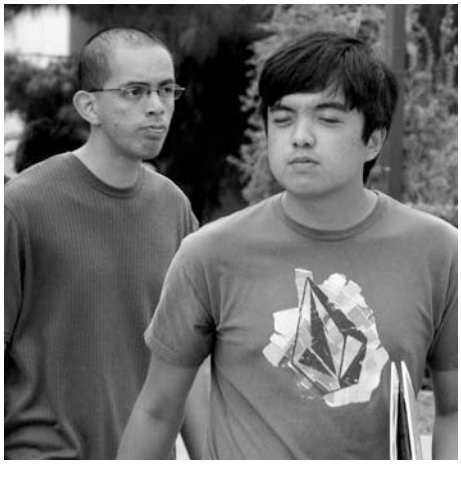
The American Bar Association has specific course requirements for 18 units of general education. All students in this program must consult a counselor for courses that satisfy the 18 units of general education.

Paralegal Studies

Paralegal Studies 1
(formerly Legal Assistant 1)
Introduction to Paralegal Studies
2 units; 2 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
In this course the students will concentrate on the background and requirements of the paralegal. Included will be the expanded use of paralegals, basic qualifications, training, nature or the work, and career considerations. Topics will include the American Legal System; methods of finding and interpreting the law; basic legal concepts and legal terminology; and legal procedures of litigation, mediation, and other non-judicial settlements. Organization and management of the law office will be included with an emphasis on ethics for the lawyer and the paralegal. Resumes, interviewing skills, and demeanor in the law office will also be covered.

Peace Officer
See Administration of Justice

Pharmacy
See Pre-Pharmacy



Philosophy – A.A. Degree

(Behavioral and Social Sciences Division)

The degree provides students with a foundation in philosophical inquiry. Upon successful completion, students will understand the major concepts and issues that have shaped philosophical traditions. This will include the ability to critically analyze contemporary social and moral issues and to assess the influential positions on theories of truth and the nature of reality. The student will also be able to analyze the logical structure of arguments and the rules of critical reasoning in their own and others' writing and thinking. Competencies will be assessed regularly through examinations, projects, and written reports. This major prepares students to pursue careers in education, law, health, and other fields where analytical skills are required.

El Camino College Major Requirements
Philosophy 5 or 8; Philosophy 10, 11; two courses from Philosophy 2, 3, 7, 23; three courses from at least two of the following groups:
1. Art 1, 3, 4, Music 11
2. History 140, 141
3. English 23, 31, 35, 36
4. Mathematics 40 or 43, 60, 120
Total Units: 24-26

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Philosophy

Philosophy 2
Introduction to Philosophy
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course students critically survey various philosophies, including idealism, naturalism, existentialism, mysticism, rationalism and empiricism. The problems of knowledge, reality, and values in these philosophies will be analyzed.

Philosophy 3
Ethics and Society
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course offers a critical study of the ethical theories and their application to problems of modern society. Ethical issues in government and law, social institutions, the arts, and international relations will be emphasized.

Philosophy 5
Critical Thinking and Discourse
3 units; 3 hours lecture
Prerequisite: English 1A with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course focuses on the study, development and application of critical reasoning and effective written augmentation. It includes instruction in methods for producing clear, well-argued position and advocacy papers as well as the linguistic and logical analysis of the writings of others.

Philosophy 7
Philosophy of Religion
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to several traditional philosophical problems connected with religious belief. Among the issues to be discussed are the existence and nature of God, the problem of evil, the nature of religious language, the existence of miracles, religious experience and mysticism, the relation between reason and rationality, and the rationality of religious belief.

Philosophy 8
Introduction to Logic
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the basic elements of reasoning, analysis of language as communication, propositional and class logic, definitions and fallacies, induction and scientific methods.

Philosophy 10
History of Ancient and Medieval Philosophy
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course offers a chronological examination of Western philosophical thought developed between 600 B.C.E. and 1300 C.E., including the principle ancient and medieval philosophies of this time period. Topics include Greek and Roman thought, and the rise and development of Christianity.

Philosophy 11
History of Modern and Contemporary Philosophy
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the development of modern and contemporary philosophical thought from the Renaissance to the 20th century. Topics will include secular humanism, the rise of modern science, empiricism, rationalism, idealism, pragmatism, logical positivism, existentialism, and analytic philosophy.

Philosophy 23
Ethics, Law and Society
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course the relationship between the various facets of moral and legal thinking is analyzed. Philosophical issues such as justification for the legal enforcement of morality, the legitimacy of an international system of law, the relationship between new technologies and the role of law are examined. The concepts of individual and international rights and obligations will be discussed.

Philosophy 50
Special Topics in Philosophy
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Philosophy more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Philosophy 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Philosophy with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides advanced studies in a subject field of Philosophy not covered in the regular departmental offerings. Regular conferences will be held with the instructor to discuss and coordinate the assigned projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Photography

Photography 1
Basic Photography
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Photography 10 or Photography 51 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
*Transfer CSU, UC**
This is a course in black and white still photography with an emphasis on the use of the 4 x 5 view camera, photographic equipment and materials; photographic chemistry and mathematics, optics and physics of light; composition lighting and creative expression. Laboratory techniques including film processing and print making are an integral part of this course.
Note: The maximum UC credit allowed for students completing Photography 1 and Photography 51 is one course.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Photography – A.S. Degree and Certificate of Achievement

(Fine Arts Division)

The degree or certificate provides students with a comprehensive foundation in skills, techniques, and processes for commercial and creative photography. Each student acquires practical and creative skills relating to camera operation, films, color theory, photo composition, lighting, processing, printing, and business operations through a wide range of studio courses. Proficiencies are demonstrated through class and laboratory projects, critiques, essays, and objective tests. Program assessment is measured by portfolios, juried and public exhibitions, program completion, and periodic program review. Students qualify to pursue a variety of careers in the field of professional photography.

El Camino Major Requirements
Photography 10 or 51; Photography 1, 2, 3, 23A; a minimum of six units from: Photography 4, 11ab*, 23B, 54, 57, 60ab, Art 141abcd*, Film/Video 22; three units from: Art 37ab, 142abcd, Business 11, 12, Physics 11 (*Only one semester of the course will be credited toward the major requirements.)
Recommended Electives: Business 20, 24
Total Units: 25-26

Certificate of Achievement
A Certificate of Achievement will be awarded to the student who completes the following courses: Photography 10 or 51; 1, 2, 3, 23A and at least 9 units from the following: Photography 4, 11ab, 23B, 54, 57, and 60ab. In addition, the student will be required to submit a portfolio of his/her photographic work to a faculty committee for evaluation of his/her competence and may be required to perform manipulative tests. Upon recommendation of the committee, the certificate will be awarded. At least 50% of the courses for the certificate must be taken at El Camino College.
Total Units: 26

Photography 2
Intermediate Photography
4 units; 2 hours lecture, 6 hours lab
Prerequisite: Photography 1 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This class emphasizes photography as a creative art. The basics of commercial portraiture, still life and fine art photography are covered. Intermediate photographic lighting and black and white printing skills are introduced.

Photography 3
Advanced Photography
4 units; 2 hours lecture, 6 hours lab
Prerequisite: Photography 2 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course focuses on photography as a commercial and creative practice. The basics of business practices for the photographer along with fashion, industrial and advertising/product photography are covered. Advanced lighting and printing skills are introduced. The production of portfolio quality black and white photographic prints and color transparencies is emphasized.

Photography 4
Portraiture
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Photography 1 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This is a course in black and white still photography with an emphasis on the photographic portrait. It includes basic portrait lighting designs, posing and the practical psychology of portrait photography, and the use of 35mm and 4″ x 5″ camera equipment for portrait work. Laboratory techniques include film processing, print making and lighting design construction.

Photography 11ab
Advanced Photojournalism
2 units; 1 hour lecture, 3 hours lab
Prerequisite: Photography 51 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course provides practical experience in taking and processing sports, news and feature photographs to be utilized by the campus newspaper and magazine. Experience is also gained in news photo editing, picture page layout, digital photography and photo scanning.
Note: The course may be taken two semesters for either journalism or photography credit.
Note: Photography 11ab is the same as Journalism 7ab.

Photography 23A
Theory of Color/Color Printing
4 units; 2 hours lecture, 6 hours lab
Prerequisite: Photography 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course covers the theory and techniques of color still photography. Emphasis is placed on the processing of various types of color negative film, color printing and color cast correction. Color theory, the psychology of color, and the effects of various light sources on color temperature are included.

Photography 23B
Intermediate Color Photography/Color Printing
4 units; 2 hours lecture, 6 hours lab
Prerequisite: Photography 23A with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course covers the advanced theory and practice of color still photography with an emphasis on the construction, processing and printing of color positive materials. The additive color process and contrast masking will be introduced as well as techniques for printing color transparencies on color reversal paper, for printing and processing photographic prints from color negatives, and for making color balanced prints.

Photography 50
Special Topics in Photography
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Photography more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Photography 51
Elementary Photography
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
*Transfer CSU, UC **
This course is an introduction to black and white photography. Instruction emphasizes camera operation and exposure settings, processing and developing, enlarging and printing, and lighting and mounting. Also covered is the critical analysis of the aesthetic and technical merits of photographs.
Note: This course satisfies the photography requirement for students majoring in journalism.
**Note: The maximum UC credit allowed for students completing Photography 51 and Photography 1 is one course.*

Photography 54
Intermediate 35mm Black and White Photography
2 units; 1 hour lecture, 3 hours lab
Prerequisite: Photography 51 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course explores intermediate-level black and white 35mm photographic techniques and processes with an emphasis on print quality. The creative application of 35mm photography is covered with an introduction to the imaginative use of hand-colored prints, infrared and kodalith films.

Photography 57
Creative Photographic Processes
2 units; 1 hour lecture, 3 hours lab
Prerequisite: Photography 54 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This is a course in creative photography with an emphasis on non-silver based photographic materials, creative black and white photographic processes, and digital processes. This will include the use of non-silver photographic emulsions applied to non-traditional surfaces and the creation of photographic books.

Photography 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Photography with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Photography not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Photography projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Photography 150
The Art of Photography
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of photography as an art form which includes the evolution of photography as an art. The course will also cover the aesthetic and cultural impact of photography as art. Also included is an examination of the techniques and methods of traditional and digital photography. Students will learn camera functions and develop their ability to analyze, evaluate, and compose photographs.
Note: This course is the same as Art 150. Course credit is limited to Art 150 or Photography 150.

Photography 151ab
The Art of Photography Digital Laboratory
1 unit; 3 hours lecture
Prerequisite: Art 150 or Film/Video 22 or Photography 51 with a minimum grade of C in prerequisite or concurrent enrollment
Credit, degree applicable
Transfer CSU
This course introduces the computer as a tool for manipulating photographic images. Topics include digital image input, scanning, and various types of digital output. Emphasis is placed on the artistic possibilities of the image.
Note: This course is the same as Art 151ab. Credit is limited to Art 151ab or Photography 151ab.

Physical Education

Physical Education General Courses

Physical Education 50
Special Topics in Physical Education
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Physical Education more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Physical Education – A.A. Degree

(Health Sciences and Athletics Division)

The degree provides an orientation to the profession through participation in diverse physical activities and study of the dimensions of exercise. Students will acquire the ability to utilize principles of human anatomy, physiology, and behavioral processes in a variety of exercise and sport applications. Competencies will be assessed by a student's ability to solve problems in exercise program design and to evaluate movement skills, tactics, and strategies in various physical activities. Upon completion of the program, students will qualify to pursue advanced degree options or entry-level positions in the discipline.

El Camino College Major Requirements

Anatomy 30, Psychology 5, Physical Education 277, 280, First Aid 1; plus 8 units of activity-units distributed over a minimum of 4 activity categories to include: Aquatics: Physical Education 240abcd, 241abcd, 242abcd, 243abcd, 244ab; Combatives: Physical Education 14ab, 220abcd, 221abcd, 222abcd; Court/Racquet: Physical Education 4abcd, 232abcd, 251abcd, 253abcd; Dance: Dance 10, 12, 14ab, 16ab, 18ab, 19ab, 22ab, 23abcd, 32ab, 33abcd, 42ab, 43abcd, 61ab, 62abcd; Fitness: Physical Education 1abcd, 2abcd, 54abcd, 101abcd, 102abcd, 135abcd, 245abcd, 260, 285abcd, 300abcd, 302abcd, 350abcd; Individual Sports: Physical Education 24abcd, 208abcd, 224abcd; Team Sports: Physical Education 4abcd, 7ab, 74abcd, 204abcd, 238abcd, 253abcd.
Note: Up to 4 units of intercollegiate sports can be counted toward the required 8 activity units. Physical Education 207A and/or 207B may be used for 2 to 4 units of the required 8 activity units.
Total Units: 24

Preparation for the Transfer Major

For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Physical Education 217
Sports Officiating
2 units; 2 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the basic principles and applications of sports officiating. Emphasis is placed on a broad range of topics including officiating objectives, conduct, communication skills, conflict management, fitness and injury prevention, legal rights and responsibilities, and career development.

Physical Education 277
Introduction to Kinesiology and Physical Education
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
Transfer CSU, UC
This course introduces the academic disciplines of kinesiology and physical education through examination of their historical, professional, and philosophical foundations. Specialities such as exercise science, biomechanics, athletic training, fitness, teaching, coaching, sport psychology, and adapted physical education will be surveyed for their scope and career options.

Physical Education Coeducational Activity Courses

Physical Education 1abcd
(formerly lab)
Body Conditioning and Physical Fitness
1 unit; 3 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course is designed to provide students with a fitness foundation through the means of cardiorespiratory endurance training, muscular strength and endurance training, and flexibility exercises. A student will be given a fitness assessment profile and then will develop an individualized exercise prescription. Student progress of fitness will be monitored and assessed regularly to assure completion of goals and objectives.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Physical Education 2abcd
Walking for Fitness
1 unit; 3 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course is designed to provide students with a foundation of aerobic fitness through walking. Students will progress from shorter duration, lower intensity walks to exercise sessions that include longer duration, higher intensity exercise and power walking. Conditioning programs will emphasize development of endurance, progressive increases in caloric expenditure, and improvements in body composition. Instruction will include examination of gait patterns utilized under different walking conditions. Strategies for the prevention of injuries will be addressed. Successful completion of the course will result in improved aerobic fitness, increased caloric expenditure, and the ability to construct effective walking programs for continued benefit.

Physical Education 3abcd
Boot Camp Fitness Training
1 unit; 3 hours lab
Credit, degree applicable;
Transfer CSU
This course is an intense, highly regimented, military style form of physical conditioning. Disciplined forms of exercise include use of; body weight, simple apparatus and calisthenics to develop aerobic and muscle fitness.

Physical Education 4abcd
Basketball
1 unit; 3 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course offers instruction and practice in the skills of basketball for the beginning to the advanced player. Offensive and defensive skills, such as footwork, dribbling, passing, and shooting, are taught along with defensive positioning and rebounding. Rules of the game will be covered along with game strategies and tournament play.

Physical Education 7abcd
(formerly 7ab)
Baseball
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
Students are introduced to the sport of baseball through instruction and practice. Topics include batting, fielding, and base running skills as well as rules and game strategy. Students will participate in game situations that allow execution of skills and strategies in a competitive environment. A conditioning program specific to the sport will also be utilized.

Physical Education 14abcd
(formerly 14ab)
Boxing
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course examines the basic skills, rules, etiquette, and strategies for boxing. Students will be introduced to the correct body position and footwork as well as the principles and mechanics of the basic punches and defenses. The training aspects of boxing as well as conditioning and fitness strategies will be covered.

Physical Education 47abcd
Introduction to Indoor Rock Climbing
1 unit;0.5 hour lecture, 1.5 hours lab
Credit, degree applicable
Transfer CSU, UC
This course provides instruction and practice for developing rock climbing skills and fitness. Instruction will include: climbing ethics, preparation, safety, and knowledge of equipment, climbing techniques and the mental approach to climbing. Conditioning exercises are incorporated to build muscular strength, muscular endurance, flexibility, and balance for rock climbing. This class will also facilitate critical thinking and problem solving skills.

Physical Education 54abcd
Weight Training
1 unit; 3 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course offers basic through advanced instruction in the theory and techniques of progressive resistance exercise training. Course content includes basic muscle anatomy, individual goal setting and progress monitoring, exposure to a variety of training systems, and specific application of methods to individual goals and needs.

Physical Education 74abcd
Soccer
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course offers instruction, practice, and competitive participation for the beginner to the advanced soccer player. Technical skills such as passing, dribbling, shooting, chipping and juggling will be practiced. Conditioning, rules, tactics and tournament play are incorporated in the course.

Physical Education 101abcd
Introduction to Exercise and Physical Activity for Older Adults
2 units; 1 hour lecture, 2 hours lab
Recommended Preparation: English 84
Credit, degree applicable
*Transfer CSU, UC**
Though both lecture and activity, this introductory course is designed to develop an understanding of the health-enhancing value of exercise in the older adult. The focus will be on the major areas of importance regarding the influence of exercise and physical activity on aging. These include cardiorespiratory fitness; strength training and development of muscle mass and bone density; postural stability, flexibility, and the prevention of falls; the role of exercise in psychological function; and exercise for the very old and frail.
Note: Letter grade or P/NP option.

Physical Education 102abcd
Exercise and Physical Activity for Older Adults, Advanced Training
1 unit; 3 hours lab
Prerequisite: one semester of Physical Education 101abcd with a minimum grade of C
Credit, degree applicable
*Transfer CSU, UC**
This is an advanced course, designed to build upon previously developed exercise concepts in a continuing program of fitness development for the older adult. Reassessments, and continued training in cardiorespiratory, strength, flexibility, balance, and posture training will allow the student to further develop health-related components of fitness.
Note: Letter grade or P/NP option.

Physical Education 135abcd
Sport-Specific, Periodized Training for Athletes
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
Transfer CSU, UC
Students will engage in physical conditioning that is specific to their sport. Training will be periodized with changes in training variables occurring at prescribed intervals and phases of training. Athletes' strengths and weaknesses in performing their sport, will be assessed; injury risk will be identified. Test results, athlete goals, and coaches' input will be used to develop individual training programs to optimize physical conditioning and reduce risk of injury during any phase of the athlete's training.

Physical Education 201
Introduction to Adapted Physical Education
2 units; 2 hours lecture,
2 hours arranged lab
Recommended Preparation: English 84
Credit, degree applicable
Transfer CSU
This course provides an introduction to Adapted Physical Education with an orientation to specific disabilities such as stroke, spinal cord injury and cerebral palsy. Exercise theory and techniques will be discussed and wheelchair transfers will be practiced. Students will learn the rationale and precautions for patient-hospital bed positioning. Consequences of disuse syndrome and fitness benefits of exercise will also be discussed. Students will gain practical experience working with students with disabilities who are enrolled in the Adapted Physical Education courses at El Camino College. Students interested in pursing careers in physical education, physical therapy and nursing will find this course valuable.

Physical Education 204abcd
Badminton
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the skills of badminton for the beginner to the advanced player. Progressions of skills include serving, clears, net shots, smash and drive. Rules, strategy and etiquette will be covered. Opportunities for singles and doubles competition in tournament play is included in the course.

Physical Education 208abcd
Bowling
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course examines the basic skills, rules, etiquette, scoring, and playing strategies for the activity of bowling. Students will be introduced to the mechanics of stance, delivery, and follow-through as well as proper grip of the ball. In this course, students will examine and practice the physical and mental skills required to succeed in this lifetime activity. Students will also participate in league play during the semester.
Note: Students will pay a user fee for each class meeting for three lines of bowling, shoes, and bowling ball. Students must furnish their own transportation to and from the bowling alley.

Physical Education 218abcd
Introduction to Coastal Fishing
1 unit;0.5 hour lecture, 1.5 hours lab
Credit, degree applicable
Transfer CSU, UC
This course examines the concepts, applications, and techniques of coastal fishing. The use of tackle, equipment, and different types of bait for different types of fishing techniques will be explored. This course will also examine the different types of fishing techniques necessary for offshore fishing, drift fishing, fly casting, and surf and beach casting. Regulations associated with coastal fishing will be covered. An overview of the issues dealing with conservation concerns will be included. Students must provide their own fishing tackle as recommended during the first class meeting. The class will meet at various off-campus fishing locations in the South Bay.
Note: A valid California State ocean fishing license is required.

Physical Education 220abcd
Naginata: A Japanese Martial Art
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course provides knowledge and skills specifically related to Naginata - a Japanese martial art. Basic Japanese terminology will orient students to the equipment and with instructional cues. Students will use the naginata (pole arm) for offensive and defensive techniques. Sparring strategies will be discussed and practiced. The course is taught according to traditional Japanese teaching methods with emphasis on self-development such as mental focus, self-discipline and self-confidence. Culture, philosophy and historical concepts with Naginata will also be discussed.
Note: Letter grade or P/NP option.

Physical Education 221abcd
Defense Tactics
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the application of combative arts for use in self defense. Techniques presented will include various strikes, punches, and kicks as well as ground defense strategies. Defense against the headlock, bear hug, lapel grab, chokes, and confrontational situations will also be examined. Physical conditioning and fitness specific to that needed to perform self-defense strikes will be emphasized. Prevention of training related injuries will be addressed through proper warm up and stretching.

Physical Education 224abcd
Golf
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the skills of golf for the beginner, intermediate or advanced golfer. Grip, stance, swing development and putting are taught along with the rules, strategy and etiquette of the game. Instruction and practice will be on campus and at a local course.
Note: Student will pay a user fee for each class meeting for 3-par 9 holes (short course). Student must provide own transportation to and from the golf course.

Physical Education 232abcd
Racquetball
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
Students will be introduced to racquetball equipment, safety, rules, regulations, strokes, and tactics. The course will ensure that the student has the physical and mental skills required to succeed in this lifetime activity.

Physical Education 233ab
Pep Squad
2 units; 4 hours lab
Enrollment Limitation: tryout
Credit, degree applicable
Transfer CSU, UC
This course is designed for cheerleaders who are able to perform cheers, dance and stunting at an intermediate level. Athletes are selected at tryouts and perform at football and basketball games, and selected community activities.
Note: This course is offered fall semester only. Tryouts are held in the spring.

Physical Education 234abcd
Off-Season Training for Pep Squad
1 unit; 2 hours lab
Credit, degree applicable
Transfer CSU, UC
This course is designed for aspiring cheerleaders and is not limited to current members of the pep squad. Students are trained in cheer, dance and stunting.
Note: This course is offered spring semester and summer session only.

The hours per week of courses may be adjusted based on the length of the term.

Physical Education 238abcd
Slo-Pitch Softball
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the skills of Slo-Pitch Softball. Batting, fielding and base running skills are taught along with rules and game strategy. Games are included in the course allowing the students to execute the skills in a competitive environment. A conditioning program specific to the sport will also be practiced.

Physical Education 240abcd
Beginning Swimming
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course is designed for the beginning swimmer. Instruction and practice will emphasize the fundamentals and stroke mechanics of freestyle, backstroke, elementary backstroke and side stroke. Basic water safety and rescues will be demonstrated and practiced. Beginning diving skills and treading water will also be taught.
Note: Letter grade or P/NP option.

Physical Education 241abcd
Intermediate/Advanced Swimming
1 unit; 2 hours lab
Prerequisite: one semester of PE 240abcd with a minimum grade of C
Credit, degree applicable
*Transfer CSU, UC**
This course is designed for intermediate and advanced swimmers. Emphasis is on instruction and practice of swimming, diving and aquatic safety skills.
Note: Letter grade or P/NP option.

Physical Education 242abcd
Swimming, Lifeguard Training
1 unit; 1 hour lecture, 1 hour lab
Recommended Preparation: English 84
Enrollment Limitation: American Red Cross Mandate - Level 5 Swimming Ability
Credit, degree applicable
*Transfer CSU, UC**
This course follows the American Red Cross (ARC) Lifeguard Training program and provides the opportunity for certification as a Red Cross Lifeguard, Waterfront Lifeguard, Head Lifeguard, and Cardiopulmonary Resuscitation (CPR) for the Professional Rescuer. Emphasis is placed on personal safety, professional conduct, injury prevention, emergency preparation, public interaction, and rescue techniques for pool and non-surf open water environment. First aid instruction with certification is also incorporated into the course.
Note: Certification requires passing both ARC practical and written examinations.
Note: This course is offered fall semester only.

Physical Education 243abcd
Swimming, Water Safety Instructor
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: English 84
Enrollment Limitation: American Red Cross Mandates - Level 5 Swimming Ability and minimum age of 17 years at start of course
Credit, degree applicable
*Transfer CSU, UC**
This course follows the American Red Cross (ARC) Water Safety Instruction (WSI) program and provides an opportunity for instructor certification. Principles and methods of teaching swimming, diving, water aerobics, and water safety are taught. Course activity also includes practice teaching.
Note: Certification requires passing both ARC practical and written examinations.
Note: This course is offered spring semester only.

Physical Education 244abcd
(formerly 244ab)
Springboard Diving
1 unit; 2 hours lab
Prerequisite: ability to swim in deep water
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in springboard diving. Each of the five dive groups, forward, inward, backward, reverse, and twisting, will be analyzed with regard to rules and mechanics.

Physical Education 245abcd
Water Aerobics
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
Instruction focuses on aerobic conditioning done in water. Emphasis is placed on cardio-respiratory endurance, flexibility, muscular strength, and endurance.

Physical Education 246abcd
Swimming for Fitness
1 unit; 3 hours lab
Recommended Preparation: ability to swim 50 yards without stopping using two of the competitive swimming strokes
Credit, degree applicable
Transfer CSU, UC
This course will emphasize swim conditioning for the improvement of health and physical fitness. The class is designed to improve cardiovascular endurance, lung capacity, and muscular strength through aerobic and anaerobic conditioning. Stroke mechanics will be addressed and refined in the four competitive swimming strokes (freestyle, backstroke, breast stroke, and butterfly).

Physical Education 250abcd
Techniques of Surfboard Riding
1 unit; 3 hours lab
Prerequisite: Physical Education 240abcd with a minimum grade of C or equivalent
Enrollment Limitation: Must be able to swim three hundred yards and tread water for three minutes
Credit, degree applicable;
Transfer CSU
This course offers instruction in handling of surfboards and practice of safe riding in the surf. Topics such as ocean safety, hazards, currents, tides, weather conditions, wave selection, surfing etiquette, board and wetsuit selection, and paddle technique will be emphasized.
Note: Students furnish their own surfboards and protective wetsuits to off-campus sites at local beaches.

Physical Education 251abcd
Tennis
1 unit; 3 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course offers tennis instruction, practice, and competitive play that is suited for students at every skill level. Basic and advanced strokes, rules of the game, tactics, and strategies for singles and doubles play will be presented with the aim of improving the student's current ability level. Exercise training specific to the physical demands of tennis will be included along with discussions on the mental aspects of the sport and prevention of tennis-related injuries. Students successfully completing the course will acquire adequate skills and knowledge to enjoy tennis as a lifelong sport.

Physical Education 253abcd
Volleyball
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the skills of volleyball. Skill progressions of serving, passing, setting, spiking, digging and blocking are taught along with game strategy. Tournaments are included in the course, allowing the students to execute the skills in a competitive environment, the rules of both the indoor and the outdoor games will be covered. Specific conditioning for the game of volleyball is also incorporated in the course.

Physical Education 256abcd
Yoga for Health and Fitness
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course is designed to improve both strength and flexibility through mind and body integration. The course presents the asanas (yoga postures) woven together to provide a workout that does not emphasize religion, philosophy or a particular type of meditation. Breathing while performing asanas will be emphasized. Various styles of Hatha Yoga will be studied and practiced. This course will give the student both the knowledge and the practice to move toward improved health and greater mind and body awareness.

Physical Education 260
Basic Principles of Fitness and Weight Control
1 unit; 1 hour lecture
Corequisite: one of the following activity courses: Physical Education 1abcd, 2abcd, 4abcd, 54abcd, 74abcd, 101abcd, 102abcd, 204abcd, 224abcd, 238abcd, 240abcd, 241abcd, 245abcd, 251abcd, 253abcd, 256abcd, 280, 285abcd, 300abcd, 302abcd, 350abcd, 400abcd
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
Transfer CSU
Students receive basic instruction for implementing physical activity programs for personal health and fitness. Guidelines for developing aerobic fitness, muscle strength and tone, flexibility, and life-long physical activity are presented in the context of reducing health risk factors, enhancing well-being, and maintaining long-term weight management. Basic nutritional recommendations are provided in support of these objectives.
Note: Assessments of aerobic fitness, body composition, and muscle strength are provided in the College's Exercise Science Laboratory.

Physical Education 270
Fitness and Sports Nutrition
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A or English 84
Credit, degree applicable
Transfer CSU
This course examines nutritional and dietary requirements of actively exercising adults and those engaged in competitive sports. The course emphasizes the study of optimal nutritional regimens for improved fitness and performance, the role of supplements as ergogenic aids, and the integration of diet and exercise in achieving goal body weight and composition.

Physical Education 272
(formerly First Aid 3)
Care and Prevention of Athletic Injuries
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
Transfer CSU, UC

This course provides the future athletic trainer, as well as coach and health care professional, the concepts surrounding the profession of athletic training. Emphasis is placed on the principles, techniques, and ethics in the prevention and care of athletic injuries. Study areas include the sports medicine team, legal issues, risk management, pathology of injury, management skills, and specific sports injuries and conditions.

Physical Education 274
Clinical Assessment and Management of Athletic Injuries
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Physical Education 272 with a minimum grade of C; valid American Red Cross First Aid and CPR Certificate
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
Transfer CSU

This course builds on concepts from Physical Education 272, Care and Prevention of Athletic Injuries, and examines advanced techniques in the field of athletic training. Emphasis is placed on recognition, assessment, management, and prevention of athletic injuries including strapping techniques. Students will implement and administer athletic training concepts as they apply to athletics and athletic competition.

Physical Education 275
Sport Psychology
3 units; 3 hours lecture
Recommended Preparation: Psychology 5; eligibility for English 1A
Credit, degree applicable
Transfer CSU

This course is a scientific study of the psychological factors associated with participation and performance in sport activities. Emphasis will be placed on how psychological principles and research can be used to understand and enhance sport performance. Topics will include historical and theoretical perspectives of sport psychology, research methods, and the relationship between sport performance and various personality, motivational, and social psychological variables. Gender and age issues, as well as the effects and management of unhealthy behaviors, will be discussed.

Note: This course is the same as Psychology 22.

Physical Education 280
Exercise and Nutrition Programs for Fitness and Weight Management
3 units; 2 hours lecture, 2 hours lab
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
Transfer CSU

Students will be given guidelines for the design of individual exercise programs of aerobic fitness, weight loss and development of muscle mass, muscle strength, and joint flexibility. Nutritional support for optimizing these fitness objectives is integrated throughout the course. Students participate in both classroom discussions and relevant exercise training in the El Camino College Fitness Center. Measurement of aerobic fitness (VO2max), body composition by underwater weighing, and tests of muscle function will be conducted in the College's Exercise Science Laboratory to guide exercise and dietary recommendations.

Physical Education 282abcd
Primary Prevention of Cardiovascular and Related Diseases
2 units; 1 hour lecture, 3 hours lab
Credit, degree applicable
Transfer CSU

This course provides instruction in risk factor identification and modification for cardiovascular related diseases including the metabolic syndrome. Emphasis is placed on healthy lifestyle behaviors including exercise training, proper nutrition, and weight management. Other topics to be discussed include smoking cessation, lipid lowering techniques, and blood pressure reduction strategies. This course is designed for apparently healthy individuals with one or more risk factors for cardiovascular disease such as physical inactivity, obesity, high blood pressure, high cholesterol, cigarette smoking, high blood sugar, and for students who are interested in these health-related topics.

Physical Education 285abcd
Continuing Fitness and Nutrition Programs
1 unit; 3 hours lab arranged per week
Prerequisite: PE 260 or 280 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU

This course provides continued guidance and training in the development and monitoring of personal exercise prescriptions and nutrition programs. Individual consultations, fitness and nutrition reassessments, a sustained training program conducted in the campus Fitness Training Center, and guided independent projects will aid the student in optimizing exercise and dietary regimens. A 3-hour orientation will explain course procedures and requirements and provide guidance in establishing the initial training program.

Note: Letter grade or P/NP option.

Physical Education 290
Personal Fitness Trainer
3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: English 84 and Mathematics 23 or Mathematics 25
Credit, degree applicable
Transfer CSU

This course provides the scientific foundations and practical experience required by Personal Fitness Trainers for certification by agencies such as American College of Sports Medicine (ACSM), National Strength Coaches Association (NSCA), National Academy of Sports Medicine (NASM), and others. The course is broad-based with topical areas including basic exercise physiology, biomechanics, fitness assessments, exercise prescriptions, fitness training principles, nutrition, weight management and work with special populations. The business aspects of Personal Training are also reviewed.

Note: Letter grade or P/NP option.

Physical Education 295
Cardiopulmonary Exercise Testing
3 units; 2 hour lecture, 3 hours lab
Recommended Preparation: Anatomy 30; eligibility for English A or English 84
Credit, degree applicable
Transfer CSU

This course is designed for the respiratory care student, practicing respiratory therapist, personal fitness trainer, or anyone interested in cardiopulmonary exercise testing. Course content includes purposes and applications of cardiopulmonary exercise testing, instrumentation, testing methods, physiological responses to exercise, and data integration and analysis.

Physical Education 300abcd
Aerobic Fitness
1 unit; 2 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course focuses on the basic principles of cardiorespiratory conditioning. Emphasis is placed on technique and development of cardiorespiratory endurance, muscle endurance, flexibility, and improved body composition. Assessments of aerobic fitness, muscle endurance, and body composition are used to develop exercise prescriptions.

Physical Education 302abcd
Step Aerobics
1 unit; 2 hours lab
Recommended Preparation: Physical Education 300abcd or equivalent skill level
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and workout that utilize an adjustable platform and choreographed stepping patterns for the primary purpose of increasing cardiorespiratory fitness. The use of hand weights, elastic bands and tubes, and training circuits will provide variety and further develop overall strength, endurance, and flexibility as well as improve body composition.

Physical Education Adapted Activity Courses

Physical Education 400abcd
Adapted Fitness
1 unit; 3 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course is designed to meet the needs of students with disabilities and provides personalized exercise programs. Exercise programs may incorporate modifications when limitations are associated with a disability. The components of physical fitness will be discussed in order to develop an understanding of training principles, benefits of exercise, and conditioning strategies. Basic nutrition guidelines related to fitness will also be discussed.
Note: Letter grade or P/NP option.
Note: This course is designed for students with disabilities.

Physical Education 401abcd
Adapted Strength Training
1 unit; 3 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course provides strength training exercise for students with disabilities. Exercise programs are personalized and self-paced. Specialized equipment is available to accommodate the needs of the students. Fitness terminology, training principles, and the benefits from resistance exercise will be discussed. Major muscle groups will be identified in their application to specific exercises.
Note: Letter grade or P/NP option.
Note: This course is designed for students with disabilities.

Physical Education 402abcd
Adapted Swimming and Hydroexercise
1 unit; 3 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course is designed to meet the needs of students with disabilities. Students will learn basic swimming skills and/or participate in personalized hydroexercise programs. Water safety skills, elements of physical fitness, and training principles in the water utilizing buoyancy and hydrodynamic resistance will be included.
Note: Letter grade or P/NP option.
Note: This course is designed for students with disabilities.

Physical Education 404abcd
Adapted Cardiovascular Fitness
1 unit; 3 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course provides cardiovascular exercise for students with disabilities. Exercise programs are personalized and self-paced. Specialized equipment is available to accommodate the needs of the students. Fitness terminology, training principles, and benefits associated with cardiovascular exercise will be discussed.
Note: Letter grade or P/NP option.
Note: This course is designed for students with disabilities.

The hours per week of courses may be adjusted based on the length of the term.

Physical Education 407abcd
Adapted Sports and Games
1 unit; 3 hours lab
Credit, degree applicable
*Transfer CSU, UC**
This course is designed to meet the needs of students with disabilities. Activities will include bowling, over-the-line baseball, and bocce ball with a brief historical foundation. Participation will enhance gross motor skills, fitness, self-esteem and social interaction. Rules, etiquette, game strategy, and sportsmanship will also be discussed.
Note: Letter grade or P/NP option.
Note: This course is designed for students with disabilities.
Note: Students must obtain their own transportation to and from Gable House Bowl and must pay a fee per line of bowling, which includes rental of shoes and bowling ball.

Physical Education 409abcd
Adapted Yoga
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU
This course is designed for students with disabilities. Emphasis is placed on personalized programs to meet each student's abilities. Improvements in core strength, flexibility, balance, relaxation, and stress reduction through mind and body integration will be stressed. Yoga postures (asanas) will be introduced and modified when necessary. Breathing patterns while performing the asanas will be emphasized. This course will give the student both the knowledge and practice to move toward improved health and greater mind and body awareness.
Note: Letter grade or P/NP option.

Physical Education Intercollegiate Athletic Courses

Physical Education 5ab
Men's Intercollegiate Baseball Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of baseball. Students will compete against member schools of the South Coast Conference and other colleges.
Note: This course is offered in the spring semester only.

Physical Education 6abc
Off-Season Training For Men's Intercollegiate Baseball Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of baseball. All students will engage in an off-season program emphasizing instruction, game tactics, skill development, strength training, and conditioning.
Note: This course is offered in the fall semester and summer session only.

Physical Education 15ab
Men's Intercollegiate Basketball Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction, training and practice in the advanced techniques of basketball and the opportunity for intercollegiate competition. Students will compete against conference schools and other colleges.
Note: This course is offered in the fall semester only.

Physical Education 16abc
Off-Season Training for Men's Intercollegiate Basketball Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU,UC**
This course provides instruction and practice in the advanced techniques of basketball. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the spring semester and summer session only.

Physical Education 20ab
Women's Intercollegiate Cross Country Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of cross training and racing. Students will compete against teams from member schools of the South Coast Conference and other colleges.
Note: This course is offered in the fall semester only.

Physical Education 21abc
Off-Season Training for Women's Intercollegiate Cross Country Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of cross country. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the spring semester and summer session only.

Physical Education 25ab
Men's Intercollegiate Cross Country Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of cross country training and racing. Students will compete against teams from member schools of the South Coast Conference and other colleges.
Note: This course is offered in the fall semester only.

Physical Education 26abc
Off-Season Training for Men's Intercollegiate Cross Country Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of cross country. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the spring semester and summer session only.

Physical Education 35ab
Men's Intercollegiate Football Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of football and the opportunity for intercollegiate competition. Students will compete against conference schools and other colleges.
Note: This course is offered in the fall semester only.

Physical Education 36abc
Off-Season Training for Men's Intercollegiate Football Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction, training, and practice in the advanced techniques of football. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the spring semester and summer session only.

Physical Education 45ab
Men's Intercollegiate Golf Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of golf and the opportunity for intercollegiate competition. Students will compete against conference schools and other colleges.
Note: This course is offered in the spring semester only.

Physical Education 46abc
Off-Season Training for Men's Intercollegiate Golf Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction, training, and practice in the advanced techniques of golf. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the fall semester and summer session only.

Physical Education 57ab
Men's Intercollegiate Swimming Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides competitive swim training and intercollegiate competition. Students will engage in a program stressing skill development, strength training, cardiovascular conditioning, and competition.
Note: This course is offered in the spring semester only.

Physical Education 58abc
Off-Season Training for Men's Intercollegiate Swimming Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides students conditioning specific to competitive swim training. Students will engage in skill development and swim conditioning as well as resistance training specific to swimming.
Note: This course is offered in the fall semester and summer session only.

Physical Education 60ab
Women's Intercollegiate Soccer Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction, training, and practice in the advanced techniques of soccer and the opportunity for intercollegiate competition. Students will compete against conference schools and other colleges.
Note: This course offered in the fall semester only.

Physical Education 61abc
Off-Season Training for Women's Intercollegiate Soccer Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of soccer. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the spring semester and summer session only.

Physical Education 65ab
Men's Intercollegiate Tennis Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction, training, and practice in the advanced techniques of tennis and the opportunity for intercollegiate competition. Students will compete against conference schools and other colleges.
Note: This course is offered in the spring semester only.

Physical Education 66abc
Off-Season Training for Men's Intercollegiate Tennis Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction, training, and practice in the advanced techniques of tennis. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the fall semester and summer session only.

Physical Education 70ab
Men's Intercollegiate Soccer Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides practice and instruction in the advanced techniques of soccer leading to intercollegiate competition with member schools of the South Coast Conference and other colleges.
Note: This course is offered in the fall semester only.

Physical Education 71abc
Off-Season Training for Men's Intercollegiate Soccer Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course is designed for off-season soccer training. Students will engage in an off-season program stressing instruction, skill development, strength training, and cardiovascular conditioning.
Note: This course is offered in the spring semester and summer session only.

Physical Education 75ab
Men's Intercollegiate Track and Field Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of track and field. Students will compete against member schools of the South Coast Conference and other colleges.
Note: This course is offered in the spring semester only.

Physical Education 76abc
Off-Season Training for Men's Intercollegiate Track and Field Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of track and field. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the fall semester and summer session only.

Physical Education 80ab
Men's Intercollegiate Volleyball Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of volleyball. Students will compete with member schools of the South Coast Conference and other colleges.
Note: This course is offered in the spring semester only.

Physical Education 81abc
Off-Season Training for Men's Intercollegiate Volleyball Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of men's volleyball. Emphasis is placed on advanced skill training, offensive and defensive systems, game strategy, and specific conditioning for volleyball.
Note: This course is offered in the fall semester and summer session only.

Physical Education 85ab
Men's Intercollegiate Water Polo Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction, training, and practice in the advanced techniques of water polo and the opportunity for intercollegiate competition. Students will compete against conference schools and other colleges.
Note: This course is offered in the fall semester only.

Physical Education 86abc
Off-Season Training for Men's Intercollegiate Water Polo Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of water polo. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the spring semester and summer session only.

Physical Education 87ab
Women's Intercollegiate Water Polo Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in advanced water polo techniques. Training format will be designed to develop endurance, strength, individual skills, and team skills specific to the sport of water polo. A variety of drills will encourage skill acquisition and foster coordinated team play. Game theory will engender an understanding of team play and the role each individual contributes to seamless team unity. Conditioning will enable the athletes to play the game at a high performance level. Training will culminate in competition against teams from other institutions as a test of skill levels both as an individual and as a group.
Note: This course is offered in the fall semester only.

The hours per week of courses may be adjusted based on the length of the term.

Physical Education 105ab
Women's Intercollegiate Basketball Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction, training, and practice in the advanced techniques of basketball and the opportunity for intercollegiate competition. Students will compete against conference schools and other colleges.
Note: This course is offered in the fall semester only.

Physical Education 106abc
Off-Season Training for Women's Intercollegiate Basketball Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of basketball. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the spring semester and summer session only.

Physical Education 110ab
Women's Intercollegiate Volleyball Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of women's volleyball. Students will compete against member schools of the South Coast Conference and other colleges.
Note: This course is offered in the spring semester only.

Physical Education 111abc
Off-Season Training for Women's Intercollegiate Volleyball Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of women's volleyball. Emphasis is placed on advanced skill training. Offensive and defensive systems, game strategy, and specific conditioning for volleyball are incorporated.
Note: This course is offered in the fall semester and summer session only.

Physical Education 115ab
Women's Intercollegiate Tennis Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction, training, and practice in the advanced techniques of tennis and the opportunity for intercollegiate competition. Students will compete against conference schools and other colleges.
Note: This course is offered in the spring semester only.

Physical Education 116abc
Off-Season Training for Women's Intercollegiate Tennis Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction, training, and practice in the advanced techniques of tennis. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the fall semester and summer session only.

Physical Education 120ab
Women's Intercollegiate Softball Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of softball. Students will compete against member schools of the South Coast Conference and other colleges.
Note: This course is offered in the spring semester only.

Physical Education 121abc
Off-Season Training for Women's Intercollegiate Softball Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of softball. All students will engage in an off-season program emphasizing instruction, game tactics, skill development, strength training, and conditioning.
Note: This course is offered in the fall semester and summer session only.

Physical Education 125ab
Women's Intercollegiate Swimming Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of swim training and intercollegiate competition. Students will compete against teams from member schools of the South Coast Conference and other colleges.
Note: This course is offered in the spring semester only.

Physical Education 126abc
Off-Season Training for Women's Intercollegiate Swimming Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of swimming. Students will engage in skill development and swim conditioning as well as resistance training specific to swimming.
Note: This course is offered in the fall semester and summer session only.

Physical Education 130ab
Women's Intercollegiate Track and Field Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of track and field. Students will compete against member schools of the South Coast Conference and other colleges.
Note: This course is offered in the spring semester only.

Physical Education 131abc
Off-Season Training for Women's Intercollegiate Track and Field Team
1 unit; 2 hours lab
Enrollment Limitation: tryout (high school varsity experience or equivalent skill)
Credit, degree applicable
*Transfer CSU, UC**
This course provides instruction and practice in the advanced techniques of track and field. All students will engage in an off-season program emphasizing instruction, skill development, strength training, and conditioning.
Note: This course is offered in the fall semester and summer session only.

Physical Education 132ab
Women's Intercollegiate Badminton Team
2 units; 10 hours lab
Enrollment Limitation: tryout (high school varsity or equivalent skill)
Credit, degree applicable
Transfer CSU, UC
This course provides women's varsity practice and instruction in the advanced techniques of badminton leading to intercollegiate competition with member schools of the South Coast Conference and other colleges. Athletes who satisfactorily fulfill the course requirements will earn an El Camino College Award.
Note: This course is offered in the spring semester only.

Physical Education 133abc
Off-Season Training for Women's Intercollegiate Badminton Team
1 unit; 3 hours lab
Enrollment Limitation: tryout (high school varsity or equivalent skill)
Credit, degree applicable
Transfer CSU
This course is open to team candidates and athletes for off-season badminton training. All participants will engage in an off-season program stressing instruction, skill development, strength training and cardiovascular conditioning.
Note: This course is offered in the fall semester only.

Physical Science

Physical Science 25
Exploring Physical Sciences
3 units; 2 hour lecture, 4 hours lab
Recommended Preparation: eligibility for English 84
Credit, degree applicable
*Transfer CSU, UC**
The course provides a step-by-step introduction to the physical sciences through the study of simple physical systems. Topics include energy, forces, elasticity, magnetism, electricity, gravitational interactions, changes of state, physical properties, and chemical changes. Drawing from their own observations, students will develop concepts and construct models that can predict outcomes of experiments. Physical Science 25 is designed for students preparing to teach at the elementary and middle school levels.
** Note: Students will not receive UC credit for Physical Science 25 if taken after a college level chemistry or physics course.*

The hours per week of courses may be adjusted based on the length of the term.

Physical Science – A.S. Degree

(Natural Sciences Division)

The physical science program provides students the opportunity to investigate diverse methods of inquiry by experiencing courses from a cross section of science disciplines. Students will develop critical thinking skills, learn to communicate effectively in writing, and acquire an understanding of major scientific concepts. Through course options, students will use mathematical concepts to solve problems and employ methods of scientific inquiry to understand the world around them. Completion of the degree requirements will prepare students with the skills and resources needed to facilitate academic and career decisions. Competencies will be assessed through regularly scheduled theory and laboratory examinations.

El Camino College Major Requirements
One of the following two-semester sequences: Chemistry 1A-1B, Physics 1A-1B, Physics 1A-1C, Physics 2A-2B, Physics 3A-3B; an additional 10-13 units from the following courses to reach of total of 20 units: Astronomy 12, 20, 25, Chemistry 4, 7A, 7B, Computer Science 1, 10, Geology 1, 2, 3, 4, 15, Mathematics 150, 180, 190, 191, 220, 270, Physics 1C, 1D
Total Units: 20

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Physical Science 50
Special Topics in Physical Science
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Physical Science more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

History of Science 11
Introduction to the History of Western Science
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course the major ideas and organizing theories of the scientific revolutions in astronomy, physics, chemistry, biology, and geology are introduced. The professional and personal lives of the scientists responsible for each revolution are discussed. Scientists covered include Galileo Galilei, Isaac Newton, Albert Einstein, and Charles Darwin. A brief introduction to the methods, philosophy, and content of science is also included and an example of a contemporary scientific revolution is also discussed.
Note: This course is primarily for the non-science major. No mathematics or previous science background is required.

Physics

Physics 1A
Mechanics of Solids
4 units; 4 hours lecture, 2 hours lab
Prerequisite: Physics 11 and 13, or Physics 2A with a minimum grade of C in prerequisite or one year of high school physics; Mathematics 190 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
*Transfer CSU, UC**
This course surveys the mathematical and physical descriptions of vectors, equilibrium, linear kinematics, Newton's Laws, energy, power, angular motion, linear and angular momentum, rotational dynamics, elasticity, simple harmonic motion and gravitation.
**Note: The maximum UC credit allowed for students completing Physics 1A, 1B, 1C, 1D and Physics 2A, 2B and/or Physics 3A, 3B is one series.*

Physics – A.S. Degree

(Natural Sciences Division)

The program is designed to provide students the opportunity to obtain a degree upon successful completion of the requirements of a physics transfer major. Upon completion of the program requirements, the student will acquire the ability to use and develop problem solving strategies that apply to physical concepts involving mechanics, thermodynamics, sound, light, electricity and magnetism, and modern physics. Laboratory activities will provide the student with a foundation in measurement and analysis techniques necessary to test, understand, and apply physical concepts. Competency will be assessed by evaluating the student's ability to quantitively and qualitatively determine the results of physical situations.

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Physics 1B
Fluids, Heat and Sound
3 units; 3 hours lecture, 2 hours lab
Prerequisite: Physics 1A with a minimum grade of C; Mathematics 191 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
*Transfer CSU, UC**
The course is a calculus-based course which covers principles of hydrostatics, Bernoulli's Principle, viscous forces, thermometry, calorimetry, heat transfer, basic processes, Carnot cycle, First and Second Laws of Thermodynamics, entropy, kinetic theory, sound and wave motion, resonance in strings and tubes, Doppler effect, and acoustics.
**Note: The maximum UC credit allowed for students completing Physics 1A, 1B, 1C, 1D and Physics 2A, 2B and/or Physics 3A, 3B is one series.*

Physics 1C
Electricity and Magnetism
4 units; 4 hours lecture, 2 hours lab
Prerequisite: Physics 1A with a minimum grade of C; Mathematics 191 with a minimum grade of C
Credit, degree applicable
*Transfer CSU, UC**
This course details the mathematical and physical description of Coulomb's Law, electric field and potential, Gauss's Law, DC circuit analysis with Ohm's Law and Kirchhoff's Law, AC circuit analysis with phase diagrams, elementary electronics, capacitance, magnetic fields and their effect on moving charges and currents, magnetic fields produced by various current configurations, induced emf, mutual and self-inductance, basic theory of dielectrics, magnetic properties of materials and Maxwell's Equations in integral and differential form.
**Note: The maximum UC credit allowed for students completing Physics 1A, 1B, 1C, 1D and Physics 2A, 2B and/or Physics 3A, 3B is one series.*

Physics 1D
Optics and Modern Physics
3 units; 3 hours lecture, 2 hours lab
Prerequisite: Physics 1A with a minimum grade of C; Mathematics 191 with a minimum grade of C
Credit, degree applicable
*Transfer CSU, UC**
This is a calculus-based course which covers geometric optics, including reflection and refraction at plane and spherical surfaces, prisms, lenses, mirrors, and simple optical instruments, and physical optics, including polarization, interference, diffraction, and introductory electromagnetic wave theory. The modern physics portion of this course covers special relativity, the particle nature of light, wave properties of particles, the Schrödinger equation, atomic physics and spectra, and nuclear physics.
Note: This course is offered in the spring semester only.
**Note: The maximum credit allowed for students completing Physics 1A, 1B, 1C, 1D and Physics 2A, 2B and/or Physics 3A, 3B is one series.*

Physics 2A
General Physics
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Mathematics 170 with a minimum grade of C or equivalent
Credit, degree applicable
*Transfer CSU, UC**
This course is a survey of kinematics, statics, dynamics, momentum, energy, rotation, gravitation and planetary motion, fluids, kinetic theory of gases, thermodynamics. In addition, the course covers elasticity and vibration, wave motion, interference, standing waves, and sound.
**Note: The maximum UC credit allowed for students completing Physics 2A, 2B and Physics 1A, 1B, 1C, 1D and/or Physics 3A, 3B is one series.*

Physics 2B
General Physics
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Physics 2A with a minimum grade of C
Credit, degree applicable
*Transfer CSU, UC**
This course is a survey of electric force, electric field, electric energy, electric circuits, electromagnetism, applied electricity, electromagnetic waves, geometric optics, wave optics, applied optics, relativity, electrons and photons, atomic structure, the nucleus, applied nuclear physics, and particle physics.
**Note: The maximum UC credit allowed for students completing Physics 2A, 2B and Physics 1A, 1B, 1C, 1D and/or Physics 3A, 3B is one series.*

Physics 3A
General Physics with Calculus
5 units; 4 hours lecture, 3 hours lab
Prerequisite: Mathematics 160 or Mathematics 190 with a minimum grade of C in prerequisite
Credit, degree applicable
*Transfer CSU, UC**
This course is part of a one-year general survey of the basic principles of physics including kinematics, dynamics, statics, momentum, energy, rotation, gravitation, and planetary motion. Elasticity and vibration, wave motion and sound, the kinetic theory of gases, and thermodynamics will also be discussed. This course is designed for life science majors requiring a calculus-based physics program.
**Note: The maximum UC credit allowed for students completing Physics 3A, 3B and Physics 1A, 1B, 1C, 1D and/or Physics 2A, 2B is one series.*

Physics 3B
General Physics with Calculus
5 units; 4 hours lecture, 3 hours lab
Prerequisite: Physics 3A with a minimum grade of C
Credit, degree applicable
*Transfer CSU, UC**
This course is a calculus-based survey of electricity, magnetism, light, geometric and physical optics, special relativity, and atomic and nuclear physics. This course is designed for life science majors requiring a calculus-based physics program.
**Note: The maximum UC credit allowed for students completing Physics 3A, 3B and Physics 1A, 1B, 1C, 1D and/or Physics 2A, 2B is one series.*

The hours per week of courses may be adjusted based on the length of the term.

Physics 11
Descriptive Introduction to Physics
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
*Transfer CSU, UC**
This course utilizes lectures and demonstrations to present various principles of physics in a non-mathematical manner. Momentum and Newton's Laws of motion, as well as work and energy will be presented in all sections of Physics 11. Other topics will be selected from: gravitation, fluids, heat, sound, light, electricity and magnetism, atomic and modern physics, special and general relativity.
**Note: Students will not receive UC credit for Physics 11 if taken after Physics 1A or Physics 2A.*

Physics 12
Laboratory for Introductory Physics
1 unit; 3 hours lab
Prerequisite: Physics 11 with a minimum grade of C or concurrent enrollment
Credit, degree applicable
*Transfer CSU, UC**
This laboratory course is designed to give the student an opportunity to experimentally reinforce some of the fundamental concepts of physics studied in Physics 11.
**Note: Students will not receive UC credit for Physics 12 if taken after Physics 1A or Physics 2A.*

Physics 13
Quantitative Aspects of Elementary Physics
1 unit; 1 hour lecture, 1 hour lab
Prerequisite: Physics 11 with a minimum grade of C or concurrent enrollment (a student who has completed one year of high school physics meets the prerequisite of Physics 11); eligibility for Mathematics 180
Credit, degree applicable
*Transfer CSU, UC**
This course covers elementary problem-solving techniques and is designed to prepare students for Physics 1A, Mechanics of Solids. The topics include: vector resolution, the free-body diagram, statics (including torque), translational and rational kinematics, translational and rational dynamics, energy and momentum, pressure and buoyancy, elementary d.c. circuits, and Ohm's Law.
**Note: Students will not receive UC credit for Physics 13 if taken after Physics 1A or Physics 2A.*

Physics 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in the Physics 1 series with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides the student an opportunity to explore research problems in physics not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned laboratory work and/or research projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Physiology

Physiology 31
Human Physiology
4 units; 2 hours lecture, 6 hours lab
Prerequisite: Anatomy 30 or 32 and Chemistry 20, 21A or 4 with a minimum grade of C in prerequisite
Credit, degree applicable
*Transfer CSU, UC**
This course is a study of cellular physiology and the functional aspects of the following human body systems: circulatory, respiratory, digestive, excretory, reproductive, muscle, nervous and endocrine. In the laboratory, experiments are performed to demonstrate principles discussed in lecture. This course is designed primarily for those majoring in the Health Sciences.
**Note: The maximum UC credit allowed for students completing Anatomy 30, Anatomy 32, and Physiology 31 is two courses.*

Political Science

Political Science 1
Governments of the United States and California
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**
This course is a survey of the concepts, theories, and functions of the American political system. The basic principles of the United States Constitution and the government of California will be examined. Emphasis will be placed on the formal and informal influences of federalism on national and state governments.

Political Science – A. A. Degree

(Behavioral and Social Sciences Division)

This degree provides students with an introduction to political science. Students will acquire knowledge of fundamental political theory and research as well as the principle functions and administrations of the governments of the United States and California. Upon successful program completion, students will be able to describe the methodology and research techniques employed by contemporary political scientists and analyze the organization and operation of California state and local governments. Students also will be able to examine urban problems, regional politics, and intergovernmental relations and their interrelationships with national institutions and policies as well as the international law and international organizations designed to deal with these issues. Competencies will be assessed regularly through examinations, essays, projects, and reports.

El Camino College Major Requirements
Political Science 1; four courses from: Political Science 2, 3, 5, 6, 8, 10; two courses from: Economics 1, 2, History 1A, 1B, 14A, 140, 141 Philosophy 10
Total Units: 21

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Political Science 2
Introduction to Comparative Politics
3 units; 3 hours lecture
Recommended Preparation: Political Science 1 and eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course students will analyze political systems of different countries in a comparative context. Emphasis will be placed on studying the differences and similarities of governmental systems found in developed democratic nation-states. Developing countries, regional systems, and new democracies will also be analyzed to illustrate the complex nature of creating and maintaining a functioning nation-state system.

Political Science 3
Introduction to Principles and Methods of Political Science
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey of the nature and scope of political science. The course focuses on the analysis of the basic concepts, political theories and subfields of the discipline. Major topics will include a description of the methodology and research techniques employed by contemporary political scientists. Also covered will be an examination of major political theories of the individual and the state, and the impact of these themes on modern political ideologies.

Political Science 5
Ethnicity in the American Political Process
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course students will analyze racial and ethnic group relations in the context of the American political system and process. The relationship of racial and ethnic groups in American society to local, state, and national government will be examined. Emphasis will be placed on problems of assimilation and integration into the American political system.

Political Science 6
Civil Rights and Liberties in the United States
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course introduces students to the study of civil rights and liberties based on current legislation and pertinent court decisions. Emphasis will be placed on First Amendment protections, rights of the defendant, and problems of minority groups facing discrimination.

Political Science 8
California State and Local Government and Intergovernmental Issues
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
In this course the organization and operation of California's state and local (county, city, special district) governments, as well as intergovernmental issues, will be examined. Topics will include urban problems, regional politics, and intergovernmental relations. California's interrelationships with local and national institutions and policies will be analyzed.

Political Science 10
Introduction to International Relations
3 units; 3 hours lecture
Recommended Preparation: Political Science 1; eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course students will examine the factors that determine the relations between nations and the problems that result from the interplay of these factors. The conditions that can lead to both conflict and cooperation among nations will be examined. Major topics include international security, issues of international political economy, and international organizations. International law and diplomacy are examined as alternative means of resolving conflict.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Political Science 50

Special Topics in Political Science

Units determined by individual course; lecture/lab hours determined by individual course

Credit status determined by individual course

This course is designed to explore topics in Political Science more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Political Science 99abc

Independent Study

1-3 units; hours to be arranged

Enrollment Limitation: two courses in Political Science with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work

Credit, degree applicable

Transfer CSU, UC - limitations apply

This course provides advanced studies in a subject field of Political Science not covered in the regular departmental offerings. Regular conferences will be held with the instructor to discuss and coordinate the assigned projects (60 hours per unit).

Note: Refer to page 11 of this Catalog for eligibility requirements.

Pre-Dentistry – A.S. Degree

(Natural Sciences Division)

The pre-professional program of dentistry provides a degree option for those students planning to enter the field. This program is designed to provide students with the necessary scientific foundation for future studies whether or not they choose to pursue a bachelor's degree in a science major. Through a series of core courses in biology, chemistry, mathematics, physics, and English, the student will acquire the ability to apply fundamental theories and principles to explain observed phenomena in life and physical sciences. Laboratories are designed to complement the lecture material and allow the student to apply the principles of the scientific method. Competencies will be assessed by examining student abilities to apply the mathematical concepts to physics and chemistry problem solving, to utilize knowledge of atomic and molecular structure to explain biological processes, and to write coherent reports of observed phenomena.

Preparation for the Transfer Major

For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Pre-Engineering – A.S. Degree

(Mathematical Sciences Division)

The degree is designed for students planning to transfer into an engineering program. The student will acquire the ability to apply principles of mathematics, physics, and chemistry. Competencies will be regularly assessed through problem solving involving differential and integral calculus of one and several variables; differential equations and linear algebra; mechanics of solids, fluids, heat, sound, electricity and magnetism; chemical reactions and chemical equations.

Preparation for the Transfer Major

For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Pre-Medicine – A.S. Degree

(Natural Sciences Division)

The pre-professional program of medicine provides a degree option for those students planning to enter the field. This program is designed to provide students with the necessary scientific foundation for future studies whether or not they choose to pursue a bachelor's degree in a science major. Through a series of core courses in biology, chemistry, mathematics, physics, and English, the student will acquire the ability to apply fundamental theories and principles to explain observed phenomena in life and physical sciences. Laboratories are designed to complement the lecture material and allow the student to apply the principles of the scientific method. Competencies will be assessed by examining student abilities to apply the mathematical concepts to physics and chemistry problem solving, to utilize knowledge of atomic and molecular structure to explain biological processes, and to write coherent reports of observed phenomena.

Preparation for the Transfer Major

For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Pre-Nursing – A.S. Degree

(Health Sciences and Athletics Division)

This degree is designed for students planning to transfer to a generic nursing program at a university. Upon successful completion of the requirements for the pre-nursing transfer major, students will acquire a foundation in the biological, physical, and social sciences as well as communication skills. This eclectic theory base will provide foundation skills that transfer students will need for practice and advanced education in a baccalaureate program in nursing. Competencies will be assessed through regularly scheduled course examinations.

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Pre-Optometry – A.S. Degree

(Natural Sciences Division)

The pre-professional program of optometry provides a degree option for those students planning to enter the field. This program is designed to provide students with the necessary scientific foundation for future studies whether or not they choose to pursue a bachelor's degree in a science major. Through a series of core courses in biology, chemistry, mathematics, physics, and English, the student will acquire the ability to apply fundamental theories and principles to explain observed phenomena in life and physical sciences. Laboratories are designed to complement the lecture material and allow the student to apply the principles of the scientific method. Competencies will be assessed by examining student abilities to apply the mathematical concepts to physics and chemistry problem solving, to utilize knowledge of atomic and molecular structure to explain biological processes, and to write coherent reports of observed phenomena.

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Pre-Pharmacy – A.S. Degree

(Natural Sciences Division)

The pre-professional program of pharmacy provides a degree option for those students planning to enter the field. This program is designed to provide students with the necessary scientific foundation for future studies whether or not they choose to pursue a bachelor's degree in a science major. Through a series of core courses in biology, chemistry, mathematics, physics, and English, the student will acquire the ability to apply fundamental theories and principles to explain observed phenomena in life and physical sciences. Laboratories are designed to complement the lecture material and allow the student to apply the principles of the scientific method. Competencies will be assessed by examining student abilities to apply the mathematical concepts to physics and chemistry problem solving, to utilize knowledge of atomic and molecular structure to explain biological processes, and to write coherent reports of observed phenomena.

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Pre-School Teaching

See Child Development

Psychology

Psychology 2
Psychology for Effective Living
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course is a study of culture and its influence on an individual's adjustment in society. It analyzes the biological and psychological influences in childhood, adolescence, adulthood, and later years. Practical approaches to problems of personal development and social relationships are discussed. Emphasis will be placed on the effects of personal interest and aptitudes on occupational goals, sex roles, human sexuality, friendship, and love.

Psychology 3
Critical Thinking and Psychology
3 units; 3 hours lecture
Prerequisite: English 1A with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course focuses on the development of critical thinking skills related to psychology. In addition to learning basic skills of logic, students will also learn about the logic of the scientific method and the common errors of human cognition that impede critical thinking. Emphasis is placed on the application of critical thinking skills to writing effective arguments, analyzing the writings of others, and understanding contemporary controversies in psychology.

Psychology 5
General Psychology
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is a survey study of human behavior and mental processes with an emphasis on basic theory and research generated by the scientific method. Major topics include psychobiology, learning, human cognition, personality, lifespan development, psychological disorders, therapeutic approaches, and social psychology.

Psychology – A.A. Degree

(Behavioral and Social Sciences Division)

This degree is designed to provide students with a foundation in the science of psychology. Psychology majors will acquire the ability to survey theories critically, research the major areas of psychology, use descriptive and inferential statistics, design and conduct research, and write reports using analysis, argumentation, and proper psychological style. This major prepares students for career opportunities in fields such as teaching, research, and/or clinical practice. Competencies will be assessed regularly by evaluating student performance on exams, essays, and reports.

El Camino College Major Requirements
Psychology 3, 5, 9A, 9B; one course from Anthropology 2, Sociology 101; two courses from: Psychology 7, 8, 12, 15, 16; one course from: Anatomy 30, Anthropology 1, Biology 10, 11, Physiology 31
Total Units: 26-27

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Psychology 7
Physiological Psychology
3 units; 3 hours lecture
Prerequisite: Psychology 5 with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course focuses on the physiological foundation of human behavior. Brain behavior relations are explored in different aspects of functioning, including consciousness, language, emotion, sex, learning and memory, sensation and perception, movement, and motivation. Also covered are neurological and psychological disorders. Data from human and infrahuman studies are presented to illustrate the logic of the scientific method in uncovering the structure and functions of the nervous and endocrine systems as they relate to behavior.

Psychology 8
Social Psychology
3 units; 3 hours lecture
Prerequisite: Psychology 5 with a minimum grade of C
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the scientific study of the individual within the group. Social Psychology deals with the psychological processes and interpersonal interactions in groups and between groups. The emphasis is on individual behavior rather than on the group as a unit. This course focuses on social perception, social cognition, the nature and assessment of attitudes, prejudice and discrimination, attraction, social influence, prosocial behavior, aggression, group processes, personality, gender and human sexuality.

Psychology 9A
Introduction to Elementary Statistical Methods for the Study of Behavior
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Psychology 5 or Sociology 101 and Mathematics 70 with a minimum grade of C in prerequisite
Credit, degree applicable
*Transfer CSU, UC**
This is a course in statistical methods and research design for the behavioral sciences. The course focuses on descriptive and inferential statistical techniques for summarizing research data and for making conclusions about the populations they represent. Students are introduced to the basic challenges and skills involved in successful undergraduate and graduate training in the behavioral sciences, including both reviewing and writing scientific research reports.
Note: This course is the same as Sociology 109.
**Note: The maximum UC credit allowed for students completing Psychology 9A and Sociology 109 or Psychology 9A and Mathematics 150 is one course.*

Psychology 9B
Experimental Methods in the Study of Behavior
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Psychology 9A or Sociology 109 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU, UC
This course continues the study of statistical methods and research design for the behavioral sciences. This course focuses on the application of the philosophy of science in general and the scientific method in particular. Students learn to design and conduct research, analyze data using descriptive and inferential statistics, and report results in the format of the American Psychological Association. Students are introduced to the basic challenges and skills involved in actively participating on a research team while conducting their own independent research projects.
Note: This course is only offered in the spring semester.

The hours per week of courses may be adjusted based on the length of the term.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Psychology 10
African American Psychology
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is an introduction to the psychological issues related to the African American experience in the United States. The relationship between the African American experience and social perception, social cognition, and identity and attitude formation is emphasized. Individual cognitive styles, personality development, and family structures of African Americans will also be examined.

Psychology 12
Human Sexuality
3 units; 3 hours lecture
Prerequisite: Psychology 5 with a minimum grade of C
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course is the scientific study of human sexuality. Emphasis is placed on analysis of sexuality from a psychological theoretical framework. Topics include the history of sex, the scientific research methods used to study sex, and the psychobiology of sex. This course also examines cultural views of sex and gender, sexual behavior and relationships, and sex as a social and medical issue.

Psychology 15
Abnormal Psychology
3 units; 3 hours lecture
Prerequisite: Psychology 5 with a minimum grade of C
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the various categories of psychopathology as well as the social criteria of "deviant" or "abnormal" behavior. The course covers the spectrum of psychopathology, from mildly maladaptive syndromes to severe psychotic reactions. Personality disorders, including sexually maladaptive behaviors, and behavioral dysfunctions from childhood to old age are also included in the course content. This course is of value to students majoring in psychology and the other behavioral sciences. This course is also of value to paraprofessional trainees in such areas as administration of justice, nursing, and community, health, and social services.

Psychology 16
Lifespan Development
3 units; 3 hours lecture
Prerequisite: Psychology 5 with a minimum grade of C
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course traces physical, cognitive and psychosocial development of the individual throughout the lifespan from conception to death. A special emphasis will be the impact of the family and culture on the individual. Attention will also be devoted to the application of research findings to ongoing developmental problems. This course is of value to students majoring in psychology and other behavioral sciences.
Note: This course does not meet the requirements of the El Camino College Nursing Program.

Psychology 21
Introduction to the Psychology of Consciousness
3 units; 3 hours lecture
Recommended Preparation: Psychology 5; eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course focuses on the scientific investigation of consciousness. This includes, but is not limited to, the areas of dream analysis, meditation, near death experiences, extrasensory perception (ESP), altered states and brain functions. Current research, theories, methods, and historical overview will be considered. In addition, other approaches to developing the mind from Eastern cultures such as Yoga, Zen Buddhism, and contemporary Sufism will be examined.

Psychology 22
Sport Psychology
3 units; 3 hours lecture
Recommended Preparation: Psychology 5; eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course is a scientific study of the psychological factors associated with participation and performance in sport activities. Emphasis will be placed on how psychological principles and research can be used to understand and enhance sport performance. Topics will include historical and theoretical perspectives of sport psychology, research methods, and the relationship between sport performance and various personality, motivational, and social psychological variables. Gender and age issues, as well as the effects and management of unhealthy behaviors, will be discussed.
Note: This course is the same as Physical Education 275.

Psychology 50
Special Topics in Psychology
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Psychology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Psychology 96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Psychology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Psychology 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Psychology with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides advanced studies in a subject field of Psychology not covered in the regular departmental offerings. Regular conferences will be held with the instructor to discuss and coordinate the assigned projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Quality Assurance – A.S. Degree and Certificate of Achievement

(Industry and Technology Division)

The quality assurance program prepares students for employment in the field and provides upgrade opportunities for currently employed personnel. By completing the degree or certificate requirements, the student will gain proficiency in the application of reliability theories, statistical process control, inspection methods, non-destructive testing, quality planning, and team-based quality improvement techniques. Competencies will be assessed regularly in accordance with criteria established by the American Society for Quality.

El Camino College Major Requirements
At least 50% of the major requirements for the Associate in Science Degree must be completed at El Camino College.
Quality Assurance 1, 4A, 7, 8, 9, 10; Machine Tool Technology 2, 40; Manufacturing Technology 2; Business 27
Total Units: 29

Certificate of Achievement
A Certificate of Achievement will be awarded to a student completing the courses listed below. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.
Quality Assurance 1, 4A, 7, 8, 9, 10; Machine Tool Technology 2, 40: Manufacturing Technology 2; Business 27
Total Units: 29

Quality Assurance

Quality Assurance 1
Fundamentals of Quality Assurance
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84 and Mathematics 40 or Mathematics 41B
Credit, degree applicable
Transfer CSU
This course provides the student with an overview of all major aspects of the quality assurance field. The course introduces modern concepts and techniques in quality assurance and how they relate to engineering and manufacturing requirements. Specific methods of collecting and evaluating quality data are examined.

Quality Assurance 4
(formerly 4A)
Inspection Methods and Techniques
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84 and Mathematics 40 or Mathematics 41B
Credit, degree applicable
Transfer CSU
This course is a study of product quality assurance as it relates to inspection techniques and methods. The primary focus of this course is on the handling, care, and reading of measuring equipment. Measurement repeatability, reproducibility, and uncertainty are examined in detail.

Quality Assurance 7
Introduction to Non-Destructive Testing
2 units; 2 hours lecture
Recommended Preparation: eligibility for English 84 and Quality Assurance 1
Credit, degree applicable
Transfer CSU
This course provides a basic overview of those non-destructive disciplines most frequently used in the inspection of aerospace and commercial hardware. These non-destructive disciplines include Radiographic Inspection; Magnetic Particle Inspection; Penetrant Inspection; Ultrasonic Inspection and Electromagnetic (Eddy Current) Inspection. In addition, those specifications that relate to and govern non-destructive testing will be discussed.

Quality Assurance 8
Techniques for Statistical Process Control
3 units; 3 hours lecture
Recommended Preparation: Technical Mathematics 1; eligibility for English 84
Credit, degree applicable
Transfer CSU
This course examines various data analysis techniques used in quality control. Students learn to distinguish between cases requiring the use of variable and attribute control charts. Other graphing techniques, such as frequency distribution analysis, are presented in order to provide students with adequate tools to extract information from inspection datasets. Also covered are problem solving, sampling plan design and implementation, and process capability studies.

Quality Assurance 9
Participative Management: Introduction to Self-Regulating Work Teams
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84 and Mathematics 40 or 41B
Credit, degree applicable
Transfer CSU
This course addresses the subject of team activity in the manufacturing environment and provides the student with an understanding of the ways in which team activities assist in the improvement of quality and productivity in work environments. Subjects covered include work team implementation, support, and maintenance. Specific team techniques such as customer surveys and statistical analysis are covered.

Quality Assurance 10
Quality Planning
3 units; 3 hours lecture
Recommended Preparation: eligibility for Technical Mathematics 1 and English 84
Credit, degree applicable
Transfer CSU
This course is a study of the principles of quality planning and their applications. With the use of statistical aids, students learn how to write proposals, reports, and inspection procedures. Also covered are selection of key characteristics, use of feedback information, use of prediction techniques and methods for formulation of quality control policies and objectives within organizational hierarchies. An overview of the concepts and the structuring of cost studies and audit programs is also included.

The hours per week of courses may be adjusted based on the length of the term.

Quality Assurance 50
Special Topics in Quality Assurance
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Quality Assurance more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Quality Assurance 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Quality Assurance field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Radiologic Technology

Radiologic Technology A
Introduction to Radiologic Technology
3 units; 3 hours lecture
Recommended Preparation: English 84 and Mathematics 23 or 25
Credit, degree applicable
Transfer CSU
This course provides a basic introduction to Radiologic Technology as a profession. The course will include foundation skills necessary to prepare students who are planning to enter the A.S. Degree Program. Course subject material includes: Patient Care, Darkroom Radiography, Radiation Protection, Radiographic Quality, Radiation Exposure and Safety, Medical Malpractice, Professional Ethics, and Introduction to Radiographic Examinations.

Radiologic Technology – A.S. Degree and Certificate of Accomplishment

(Health Sciences and Athletics Division)

The radiologic technology (medical x-ray) program is a competency-based health science specialty. The program provides a specialized educational experience which assesses progress through clinical application evaluations and academic course work. Successful completion of the program (degree and certificate) prepares students for employment as skilled medical imaging practitioners and makes them eligible for state and national certification examinations. Program assessment is conducted by monitoring student success rates on the State and National Certification Examinations.

General Information
Radiologic Technology courses must be completed with a minimum grade of C before the student may enroll in the next course.

Program Length and Licensing Requirements
The Associate Degree Radiologic Technologist Program is twenty-five months in length, after the completion of the program prerequisite classes. The twenty-five months includes the academic semesters and clinical training (taken concurrently). Satisfactory completion of the prescribed course of study qualifies graduates to take both State and National Certification Examinations. The Radiologic Technology Program is accredited by the California State Department of Public Health Services - Radiologic Health Branch (CDPHS-RHB), and the Joint Review Committee on Education in Radiologic Technology (JRCERT).

Program Prerequisites
- High school graduate with at least a C average or GED equivalent
- Complete the following courses: Anatomy 32, Computer Information Systems 13, English 1A, Mathematics 40 or 43, Physiology 31, Psychology 5, Radiologic Technology A. A minimum grade of C must be earned in each course.
- Grade point average of 2.25 or better

Acceptance into Radiologic Technology Program
New students are admitted to the program once per year, in the fall semester. Acceptance at El Camino College does not guarantee entrance into the Radiologic Technology Program. A Program Application and transcripts of all academic work completed (high school and college), must be filed in the Office of the Program Director, by appointment, after the completion of the three program prerequisite courses listed above (Anatomy 32, Physiology 31 and Radiologic Technology A.)

If the number of eligible applicants exceeds the class size limit, a waiting list will be established. An applicant on the waiting list must reaffirm interest in enrolling in the next class by submitting a letter of intent to the Program Director. This letter of intention will be mailed by the Program Director to each applicant on the waiting list and must be returned to the Program Director by the date specified on the letter (usually the end of May). Students will not automatically remain on the waiting list. It is the student's responsibility to inform the Program Director in writing of any changes to their application information.

Prior to Starting the Program
Students will be required to attend a mandatory orientation session during the summer, before beginning the program in the fall semester. Accepted students will be required to undergo a complete physical examination, including a TB test. Students must submit a current CPR for BLS provider card, and a criminal background check clearance as required by the Joint Commission on Accreditation of Health Care Organizations (JCAHO) prior to placement at a clinical education training facility. The student is responsible for the cost of these requirements.

Fees
Cost of books, uniforms and miscellaneous supplies must be borne by the student and is estimated at approximately $1,500 for the first year, and approximately $500 the second year of the program.

El Camino College Major Requirements
Radiologic Technology 91, 93, 106, 107, 108, 111, 123, 124, 217, 218, 233, 244, 255; Medical Terminology 1
Total Units: 58 *(Continued on next page)*

Radiologic Technology

(Continued from previous page)

Students must complete Radiologic Technology 217, 218, 233, 244 and 255 at El Camino College. Radiologic Technology students must complete the general education requirements described in the college catalog (see A.S. Degree requirements), to be eligible for certification by the American Registry of Radiologic Technologists.

Certificate of Accomplishment
To be eligible for the Certificate of Accomplishment, the student must have an Associate in Science Degree in Radiologic Technology. Required Certificate Courses: Radiologic Technology 219, 328
Total Units: 10.5

Radiologic Technology 217, 218, 219, 233, 244, 255 and 328 must be completed at El Camino College. Students who compete all Radiologic Technology Associate in Science Degree and Certificate of Accomplishment requirements are eligible for certification by the American Registry of Radiologic Technologists (ARRT).

Licensure
Students who complete all Radiologic Technology Associate in Science degree and Certificate of Accomplishment requirements are eligible to take the licensing examination administered by the American Registry of Radiologic Technologists (ARRT) to become a registered Radiologic Technologist (R.T.). Upon completion of the ARRT exam, students are eligible to apply for the State of California, Department of Health Public Services, Radiation Health Branch, Certified Radiologic Technologist (C.R.T.) licensure and the Fluoroscopy examination and licensure (C.R.T.), (R,F).

Program Readmission and Course Repetition
Students who leave the Radiologic Technology program for any reason (self or faculty initiated) are eligible to be readmitted to the program subject to availability of space. Radiologic Technology courses in which a student has received a D or F grade may be repeated one time and the student may only re-enter the program one time. The JRCERT requires that all students complete the program within three years of their original admission date.

This policy is available for review in the Program Director's Office and is published in the Student Handbook. Student academic standing at the time of leaving the program will determine whether academic support courses will be prescribed before re-entry. Students must comply with all conditions of acceptance for re-entry before the student may return. The student may be asked to repeat courses previously passed within the program for successful continuance in the program.

Advanced Standing
The student with prior training or experience may petition for credit by examination for Radiologic Technology 111 and 123.

Prospective students who have had prior education in an accredited Radiologic Technology program may request consideration for entry into the Radiologic Technology Program with advanced placement if space permits. Foreign graduates must have their transcripts evaluated and meet with a college counselor for matriculation prior to meeting with the Program Director regarding the application process.

Special Note Regarding American Registry of Radiologic Technologists (ARRT) Certification
Students must comply with the "Rules of Ethics" contained in the American Registry of Radiologic Technologists (ARRT) Standards of Ethics. The "Rules of Ethics" are minimally acceptable standards of professional conduct for all Registered Technologists and Applicants. The "Rules of Ethics" are intended to promote protection, safety and comfort of patents. Registered Technologists and applicants engaging in any of the conduct or activities noted in the "Rules of Ethics" or in the conviction of a crime, including a felony, gross misdemeanor or a misdemeanor with sole exception of speeding and parking violations, all alcohol and drug related violations are subject to sanctions and must be reported.

Applicants who have questions regarding limitations related to licensure should contact the ARRT directly.

Radiologic Technology 50
Special Topics in Radiologic Technology
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Radiologic Technology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Radiologic Technology 91
Radiographic Pathology
1 unit; 1 hour lecture
Enrollment Limitation: presently practicing clinical radiography (student or registered technologist)
Credit, degree applicable
Transfer CSU
This course provides the radiologic technology student and the practicing radiographer with a basic working knowledge of pathology as it pertains to diagnostic medical radiography.

Radiologic Technology 93
Venipuncture and Pharmacology for the Radiologic Technologist
1 unit; 0.5 hour lecture, 1.5 hours lab
Prerequisite: Radiologic Technology 108 and 124 with a minimum grade of C in prerequisite or equivalent
Corequisite: Radiologic Technology 255
Credit, degree applicable
Transfer CSU
This course provides the student with the basic concepts of pharmacology and venipuncture. The theory and practice of the basic techniques of venipuncture and the administration of diagnostic contrast agents and/or intravenous medications is included. Delivery of patient care during these procedures is also emphasized.

Radiologic Technology 96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Radiologic Technology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Radiologic Technology 106
Clinical Experience 1
4 units; 12 hours lab to be arranged
Corequisite: enrollment in Radiologic Technology 111 and 123
Enrollment Limitation: admission to the Radiologic Technology Program
Credit, degree applicable
Transfer CSU
This course provides an environment for the development of skills in patient transportation, darkroom operation, and office and file room protocols. Also included is an orientation to hospital policies and procedures, patient care, professional ethics, principles of radiation exposure, practical aspects of radiation protection, and introduction to patient positioning.

Radiologic Technology 107
Clinical Experience 2
7 units; 21 hours lab to be arranged
Prerequisite: Radiologic Technology 106, 111, and 123 with a minimum grade of C in prerequisite
Corequisite: Radiologic Technology 124
Credit, degree applicable
Transfer CSU
This course provides an introduction to the routine radiographic procedures and positioning skills for the performance of upper extremity, lower extremity, thorax, vertebral column, biliary, genitourinary, and gastrointestinal system examinations.
Note: Students must show proof of current Cardio Pulmonary Resuscitation (CPR) certification by the American Heart Association or American Red Cross (Health Care Provider/Professional Rescuer) at the first class meeting.

Radiologic Technology 108
Clinical Experience 3
5 units; 35 hours lab to be arranged (8 weeks course)
Prerequisite: Radiologic Technology 107 and 124 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This course provides continued development of clinical skills in the art of radiography. Areas of skill development include the upper and lower extremities, vertebral column, and thoracic cavity. Emphasis will be placed on advanced contrast examinations and radiation protection of the patient, self, and co-workers, especially in the fluoroscopy examinations.

Radiologic Technology 111
Fundamentals of Radiologic Technology
4 units; 3 hours lecture, 3 hours lab
Corequisite: enrollment in Radiologic Technology 106
Enrollment Limitation: admission to the Radiologic Technology Program
Credit, degree applicable
Transfer CSU
This course is designed to prepare the student with entry level skills and knowledge to perform safely in a radiology department. Topics covered are: Darkroom Radiography, Professional Ethics, Patient Care, Production of X-Ray, Radiographic Quality, Radiographic Technique, Radiation Safety and Introduction to Radiographic Positioning.

Radiologic Technology 123
Radiographic Positioning 1A
4 units; 3 hours lecture, 3 hours lab
Corequisite: Radiologic Technology 106 and 111
Enrollment Limitation: admission to the Radiologic Technology Program
Credit, degree applicable
Transfer CSU
This course is designed to prepare the student with entry level skills and knowledge to perform safely in a radiology department. Topics include patient care, professional standards, and ethics and law as they relate to the radiologic technology profession. Patient positioning and radiographic exposure of the chest, thorax, abdomen, upper and lower extremities, shoulder and pelvic girdle are introduced along with the use of various radiographic devices. Laboratory practice, radiographic image analysis and topographical anatomy are presented as they apply in the production of optimum radiographic examinations.

Radiologic Technology 124
Radiographic Positioning 1B
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Radiologic Technology 106, 111, and 123 with a minimum grade of C in prerequisite
Corequisite: Radiologic Technology 107
Credit, degree applicable
Transfer CSU
In this course, students will study additional principles of radiographic positioning. Emphasis is placed on those procedures involving the vertebral column, contrast media, gastrointestinal system, genitourinary system and biliary systems. Special imaging considerations for the pediatric and geriatric patients, the acutely ill, surgical patients, and trauma patients will also be covered. Radiographic technique, anatomy, specialized mobile and fluoroscopic equipment, patient safety, and radiation protection will be included. Laboratory practice, film analysis, and topographical anatomy are presented as they apply in the production of optimum radiographic examinations.

Radiologic Technology 217
Clinical Experience 4
7 units; 21 hours lab to be arranged
Prerequisite: Radiologic Technology 108 with a minimum grade of C
Corequisite: enrollment in Radiologic Technology 233 and 244
Credit, degree applicable
Transfer CSU
This course continues in the development of clinical skills in the art of radiography with special emphasis in the area of skull radiography.

Radiologic Technology 218
Clinical Experience 5
7 units; 21 hours lab to be arranged
Prerequisite: Radiologic Technology 217 and 233 with a minimum grade of C in prerequisite
Corequisite: enrollment in Radiologic Technology 255
Credit, degree applicable
Transfer CSU
This course continues with the development of clinical skills in the art of radiography with special emphasis on procedures requiring use of contrast agents, special imaging systems and special image modalities.

The hours per week of courses may be adjusted based on the length of the term.

Radiologic Technology 219
Clinical Experience 6
6 units; 35 hours lab to be arranged (8 weeks course)
Prerequisite: Radiologic Technology 218 and 255 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This course continues with the development of clinical skills in the art of radiography requiring the use of contrast agents and special imaging systems. Further development of radiographic skills in portable and surgical radiography, emergency rooms and critical care areas will be presented.

Radiologic Technology 233
Radiographic Positioning 2
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Radiologic Technology 108 and 124 with a minimum grade of C in prerequisite
Corequisite: Radiologic Technology 217 and 244
Credit, degree applicable
Transfer CSU
This course shall continue with additional principles of radiographic positioning. Emphasis is placed on those procedures involving the cranium. Radiographic technique, anatomy, specialized equipment, patient safety, and radiation protection will be included. Special imaging techniques of the cranium, including cerebral angiography and neuropathology will also be covered.

Radiologic Technology 244
Radiation Physics, Equipment, and Safety
4 units; 4 hours lecture
Prerequisite: Radiologic Technology 124 with a minimum grade of C
Corequisite: Radiologic Technology 217 and 233
Credit, degree applicable
Transfer CSU
This course introduces fundamentals of radiation and radiological physics. Additional subjects covered are: the operation of medical x-ray units, the effects of radiation in humans, the principles of radiation protection as applied in medical radiography, an introduction to health physics instrumentation and radiation control regulations, and the production of radiation by fluoroscopic units with an emphasis on radiation health and safety. Principles of digital imaging will also be discussed.

Radiologic Technology 255
Advanced Imaging/Special Procedures
4 units; 4 hours lecture
Prerequisite: Radiologic Technology 233, 244 and 217 with a minimum grade of C in prerequisite
Corequisite: enrollment in Radiologic Technology 218
Credit, degree applicable
Transfer CSU
This course is designed for the advanced radiography student. Emphasis is on "specialized radiographic procedures" and "newer imaging modalities." Patient care, positioning, anatomy and radiation health/safety are accented.

Radiologic Technology 328
Clinical Experience 7
4.5 units; 3 hours lecture, 32 hours lab to be arranged (6 weeks course)
Prerequisite: Radiologic Technology 219 with a minimum grade of C
Credit, degree applicable
Transfer CSU
This course continues with the development of clinical skills in the art of radiography with special emphasis in "specialized radiography and new modalities." This course also prepares the student for State and National Certification Examinations.

Real Estate

Real Estate 11
Real Estate Principles
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU
This course covers various aspects of real estate: introduction to legal aspects, title and escrow procedures, property management, appraisal, finance, and the transfer of real property. Students develop basic vocabulary and test-taking skills in partial preparation for state examination for the real estate and appraiser licenses.
Note: The California Department of Real Estate (DRE) requires completion of this course prior to obtaining the California real estate salesperson license. The DRE has approved this course as one of the elective courses for the real estate broker license. The Office of Real Estate Appraisal (OREA) has approved this course for 54 hours of basic education (BE) credit. OREA has approved this course for 51 hours of continuing education (CE) credit for license renewal provided the student has 90% attendance and passes a closed book final exam.

Real Estate 12A
Legal Aspects of Real Estate
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
This course provides instruction on buying, selling, and management of real property. Students study California property law, community property, liens, sales contracts, escrow, commissions, transfers, licensing regulations, and public policy.
Note: The California Department of Real Estate (DRE) has approved this course as one of the optional courses that must be completed within 18 months of conditional salesperson licensure in addition to the required courses of Real Estate Principles and Real Estate Practice. This course is statutorily required for the California DRE broker license. The Office of Real Estate Appraisal (OREA) has approved this course for 54 hours of basic education (BE) credit. OREA has approved this course for 51 hours of continuing education (CE) credit for license renewal provided the student has 90% attendance and passes a closed book final exam.

Real Estate 13
Real Estate Practice
3 units; 3 hours lecture
Recommended Preparation: Real Estate 11 or current enrollment or California Department of Real Estate (DRE) license or equivalent experience
Credit, degree applicable
Transfer CSU
The course presents the forms and provides instruction on the techniques necessary to close a residential real estate sales transaction. Emphasis is placed on the advertising, listing, financing, appraisal, escrow, and taxation aspects of real estate.
Note: The California Department of Real Estate (DRE) requires completion of this mandated course within 18 months of licensure for the salesperson conditional license in addition to completion of the required Real Estate Principles course. This course is statutorily required for the DRE broker's license.

Real Estate – A.A. Degree and Certificates of Achievement

(Business Division)

The degree or certificates are designed to provide students with competencies to enter careers in residential and commercial real estate appraisal, escrow, exchange, development, investment, leasing, property management, sales, and title insurance. The program meets legislatively mandated education for the California Department of Real Estate (DRE) salesperson and broker license exams as well as the Office of Real Estate Appraisal (OREA) license exam. Courses are approved by the DRE and OREA for basic and continuing education, including computer applications and Uniform Standards of Professional Appraisal Practice (USPAP). Competencies are assessed using projects and exams.

El Camino College Major Requirements

Real Estate 11, 14A, 40 and one of the following options:

Real Estate Option: Real Estate 12A, 13; complete one of the following: Business 1A, Real Estate 16; complete two of the following: Law 5, Real Estate 12B, 14B, 17, 18, 19, 20, 21, 26, 31, 41

Total Units: 24-25

Real Estate Appraisal Option: Real Estate 16, 25, 41; complete two of the following: Real Estate 14B, 19, 21, 31; complete two of the following: Business 15, 28, Computer Information Systems 13, Law 6

Total Units: 33

Mortgage Brokerage Option: Business 1A, Real Estate 13, 16, 25, 31; complete two of the following: Real Estate 12A, 14B, 17, 19, 26; complete one of the following: Business 5A, 15, 28

Total Units: 34-35

Certificates of Achievement

A Certificate of Achievement will be granted to the student completing the requirements for the Mortgage Loan Brokerage Option or Real Estate Option or Real Estate Appraisal Option or Real Estate Assistant Option. A minimum of 10 units must be completed at El Camino College.

Mortgage Loan Brokerage Option: Real Estate 11, 13, 14A, 25, 31; Business 1A or Real Estate 16; complete two courses from the following: Business 17 or Real Estate 14B, Real Estate 12A, 19, 26, 40; complete one course from the following: Business 5A, 15, 28

Total Units: 27-29

Real Estate Option: Real Estate 11, 12A, 13, 14A, 25, 40; Business 1A or Real Estate 16; complete two courses from the following: Law 5, Real Estate 12B, 14B, 17, 18, 19, 20, 21, 26, 27, 28, 31, 41

Total Units: 27-28

Real Estate Appraisal Option: A Certificate of Achievement will be awarded only to those possessing an associate or higher degree or who will complete degree concurrently with the certificate requirements.

Real Estate 11, 14A, 16, 25, 40, 41; complete two of the following: Real Estate 14B, 19, 21; complete two of the following: Architecture 150A, Business 15, 28, Computer Information Systems 13, Law 6

Total Units: 30

Real Estate Assistant Option (pending approval by the California Community Colleges System Office): Real Estate 11; complete two courses from the following: Real Estate 12A, 13, 14A, 26, 40; complete one course from the following: Business 11, 12, 27, 28, 43; complete one course from the following: Computer Information Systems 13, Physical Education 260, Real Estate 25

Total Units: 13-15

Continuing Education

Special topic seminars approved by the California Department of Real Estate (DRE) to renew real estate licenses are offered within some real estate classes. (Sponsor No. 0170-xxx; per course number.) Many courses are approved by the California Office of Real Estate Appraisal (OREA) for Continuing Education credit for license renewal (Sponsor #95ECC). Check current Schedule of Classes and catalog descriptions for Continuing Education offerings.

Real Estate 14A

Real Estate Finance I

3 units; 3 hours lecture

Recommended Preparation: Real Estate 11 or concurrent enrollment or California Department of Real Estate (DRE) license or equivalent experience; Business 15

Credit, degree applicable

Transfer CSU

This course provides instruction on the various aspects of finance, including fixed and variable rate loans, conventional and government financing programs, and creative financing options. Students will calculate unpaid loan balance, interest, and qualifying ratios.

Note: The California Department of Real Estate (DRE) has approved this course as one of the optional courses that must be completed within 18 months of conditional salesperson licensure in addition to the required courses of Real Estate Principles and Real Estate Practice. This course is statutorily required for the California DRE broker license. The Office of Real Estate Appraisal (OREA) has approved this course for 54 hours of basic education (BE) credit. OREA has approved this course for 51 hours of continuing education (CE) credit for license renewal provided the student has 90% attendance and passes a closed book final exam.

Real Estate 14B

Advanced Real Estate Finance

3 units; 3 hours lecture

Prerequisite: Real Estate 14A with a minimum grade of C

Credit, degree applicable

Transfer CSU

This course covers the more advanced methods of financing real estate projects, including non-residential commercial and industrial property. The material presented includes the instruments of finance, types of structured loans, discounting leases, and the sale-leaseback transaction.

Note: The California Department of Real Estate (DRE) has approved this course as one of the elective courses for the real estate broker license. The Office of Real Estate Appraisal (OREA) has approved this course for 54 hours of basic education (BE) credit. OREA has approved this course for 51 hours of continuing education (CE) credit for license renewal provided the student has 90% attendance and passes a closed book final exam.

The hours per week of courses may be adjusted based on the length of the term.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Real Estate 16
Real Estate Economics
3 units; 3 hours lecture
Recommended Preparation: Real Estate 11, 14A, 15A, or California Department of Real Estate (DRE) license or California Office of Real Estate Appraisal (OREA) license or equivalent experience
Credit, degree applicable
Transfer CSU
This course provides instruction on the aspects that tie economics and politics to real estate land use. Emphasis is on the factors which create values in real estate, including urban development, governmental policies, and requirements for development as well as the business and real estate cycles.
Note: This course, or an accounting course, is approved by the California Department of Real Estate (DRE) as one of the optional courses that must be completed withing 18 months of conditional salesperson licensure in addition to the required courses of Real Estate Principles and Real Estate Practice. This course, or an accounting course, is statutorily required for the California DRE broker license. The Office of Real Estate Appraisal (OREA) has approved this course for 54 hours of basic education (BE) credit. OREA has approved this course for 51 hours of continuing education (CE) credit for license renewal provided the student has 90% attendance and passes a closed book final exam.

Real Estate 19
Real Property Management
3 units; 3 hours lecture
Recommended Preparation: Real Estate 11, 12A, or California Department of Real Estate (DRE) license or California Office of Real Estate Appraisal (OREA) license or equivalent experience; Business 15
Credit, degree applicable
Transfer CSU
Introduction to the aspects of real estate management, including the rights and responsibilities of the parties, personnel, and ownership of income-producing property with emphasis on residential property maintenance and contracts.
Note: The California Department of Real Estate (DRE) has approved this course as one of the optional courses that must be completed within 18 months of conditional salesperson licensure in addition to the required courses of Real Estate Principles and Real Estate Practice. The DRE has approved this course as one of the elective courses for the real estate broker license. The Office of Real Estate Appraisal (OREA) has approved this course for 54 hours of basic education (BE) credit. OREA has approved this course for 51 hours of continuing education (CE) credit for license renewal provided the student has 90% attendance and passes a closed book final exam.

Real Estate 21
Real Estate Investment
3 units; 3 hours lecture
Recommended Preparation: Real Estate 11 and Real Estate 14A
Credit, degree applicable
Transfer CSU
This course discusses the acquisition phase, holding period and disposition analysis for real estate investment property. The course covers a review of pro forma statements, the effects of leverage and cash flow operating statements. Strategies on alternatives of a sale, exchange, continuation of operations, capital restructure, depreciation, installment sale and tax basis are covered.
Note: The Office of Real Estate Appraisal (OREA) has approved this course for 54 hours of basic education (BE) credit. OREA has approved this course for 51 hours of continuing education (CE) credit for license renewal provided the student has 90% attendance and passes a closed book final exam.

Real Estate 25
Computer Applications in Real Estate
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Real Estate 11 or concurrent enrollment or equivalent (The California Department of Real Estate (DRE) license or the California Office of Real Estate Appraisal (OREA) license is equivalent.)
Recommended Preparation: Business 54 or Computer Information Systems 13
Credit, degree applicable
In this course students will explore and evaluate basic computer functions and technologies, along with the latest computer software relating to real estate appraisal, property management, finance, escrow, sales, trust funds, record keeping, e-Business, and other areas of real estate.

Real Estate 26
Principles of Escrow
3 units; 3 hours lecture
Recommended Preparation: Real Estate 11, 12A, or California Department of Real Estate (DRE) license or equivalent experience; Business 1A or Business 15
Credit, degree applicable
Transfer CSU
This course introduces the functions and types of escrow. Students are introduced to the procedures used in the escrow industry. Students develop proficiency in common terms of escrow business terminology and the basic escrow steps in a real estate transaction.
Note: The California Department of Real Estate (DRE) has approved this course as one of the optional courses that must be completed within 18 months of conditional salesperson licensure in addition to the required courses of Real Estate Principles and Real Estate Practice. The DRE has approved this course as one of the elective courses for the real estate broker license.

Real Estate 31
Mortgage Loan Brokering and Lending
3 units; 3 hours lecture
Recommended Preparation: Real Estate 11 or Business 15
Credit, degree applicable
Transfer CSU
This course introduces the student to the principles and operations of the mortgage loan brokering field. The emphasis is on the lending rules for residential property. Students learn lending laws of Regulation Z, usury laws, disclosures, maximum fees and charges, agency relationships, advertising laws, HUD/RESPA calculations and the loan process. This course partially satisfies the California requirements for the Real Estate Salesperson and California Real Estate Broker's licenses.
Note: The California Department of Real Estate (DRE) has approved this course as one of the optional courses that must be completed within 18 months of conditional salesperson licensure in addition to the required courses of Real Estate Principles and Real Estate Practice. The DRE has approved this course as one of the elective courses for the real estate broker license.

Real Estate 40
Real Estate Appraisal
3 units; 3 hours lecture
Recommended Preparation: Real Estate 11 or California OREA appraisal license or California DRE broker's license
Credit, degree applicable
Transfer CSU
This course provides instruction on the valuation principles of real estate appraisal, including architectural styles, types of construction, lot valuation, depreciation, the approaches to value, and appraisal standards and ethics.
Note: The California Department of Real Estate (DRE) has approved this course as one of the optional courses that must be completed within 18 months of conditional salesperson licensure in addition to the required courses of Real Estate Principles and Real Estate Practice. This course is statutorily required for the California DRE broker license. The Office of Real Estate Appraisal (OREA) has approved this course for 54 hours of basic education (BE) credit. OREA has approved this course for 51 hours of continuing education (CE) credit for license renewal provided the student has 90% attendance and passes a closed book final exam.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Real Estate 41
Advanced Real Estate Appraisal
3 units; 3 hours lecture
Prerequisite: Real Estate 40 with a minimum grade of C or California OREA license or California DRE broker license
Credit, degree applicable
Transfer CSU
This course is a continuation of Real Estate 40. This course provides instruction on advanced concepts of the valuation process, residential income, commercial and industrial property appraisals in addition to appraisal standards and ethics, operating expenses, capitalization, and depreciation.
Note: The California Department of Real Estate (DRE) has approved this course as one of the elective courses for the real estate broker license. The Office of Real Estate Appraisal (OREA) has approved this course for 54 hours of basic education (BE) credit. OREA has approved this course for 51 hours of continuing education (CE) credit for license renewal provided the student has 90% attendance and passes a closed book final exam.

Real Estate 50
Special Topics in Real Estate
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Real Estate more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Real Estate 95/96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Real Estate/Business field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Recreation – A.A. Degree

Health Sciences and Athletics Division)

The degree is designed for students desiring to transfer or to obtain entry-level positions in recreation and leisure services. After acquiring the historical, philosophical, and theoretical foundations of recreation, students will apply administrative, leadership, planning, supervision, and counseling skills in diverse commercial, municipal, and camp recreation settings. Competencies will be assessed by evaluating the student's ability to solve problems in recreation and leisure program design and to develop organizational skills in a variety of situations.

El Camino College Major Requirements
First Aid 1, Physical Education 217, Recreation 207, 217, 307; plus 7-9 units from: Anatomy 30, Child Development 3, Music 7, Physical Education 242abcd*, 243abcd*, Psychology 5, Sign Language/Interpreter Training 15 (*one semester of)
Total Units: 21-23

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guidesheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Recreation

Recreation 96abcd
Cooperative Career Education
2-4 units; hours to be arranged
Enrollment Limitation: Parallel Plan (Work and Attend School at the Same Time): Enrollment in a minimum of seven units, including Cooperative Career Education; employment in a job related to the major or career goal by the third week of the semester; completion of or current enrollment in one course from the major
Alternate Plan (Work and Attend School Alternately): Successful completion of one semester at El Camino College including one course from the major before initial enrollment in plan; enrollment limited to one other class during the semester; employment in a job related to the major or career goal by the third week of the semester; successful completion of at least seven units of other class work at El Camino before re-enrolling in plan
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Recreation field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Recreation 207
Introduction to Recreation
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
Transfer CSU
This course examines the basic concepts of recreation and leisure as well as the trends in the overall field of recreation services. The course is designed to encourage students to critically examine the field of recreation and how it impacts their lives and those of the individuals in their community.

Recreation 217
Recreational Leadership
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
Transfer CSU
Leadership concepts and skills for students beginning to work in recreational settings are presented in a leisure services context. Roles, types, and responsibilities of recreational leaders are examined as well as skills needed to encourage participation in recreation programs among different age groups.

Recreation 307
Camp Counseling: Leadership and Programming
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A or 84
Credit, degree applicable
Transfer CSU
This course covers the history, practices, and philosophy of organized camp and camp counseling. Emphasis is placed on the camp counselor's role in guidance and leadership, analysis of techniques of camp counseling, proper planning, and theory of camping. The operations of day and short-term recreational camps and outdoor camps, as well as professional opportunities in the field, are also examined.

Respiratory Care

Respiratory Care 95/96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Respiratory Care field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Respiratory Care – A.S. Degree and Certificate of Achievement

(Helath Sciences and Athletics Division)

The degree and/or certificate in respiratory care are awarded after successful completion of the entry-level respiratory care program. The program is designed for students planning to become California licensed respiratory care practitioners and transfer to an advanced-level respiratory care program at the community college or university level. Completion of the requirements also allows students to apply for national entry-level and specialty credentialing examinations. Students will acquire the skills to provide a wide range of high technology and high-touch therapeutic interventions to patients in acute and chronic care settings. Competencies are assessed through the use of classroom, laboratory, and clinical performance evaluations in simulated and actual patient care situations. Program success is determined through examining employment rates and licensure exam pass rates.

There are three routes to completing the associate degree and/or entry level certificate in Respiratory Care in order to become a licensed practitioner.*

El Camino Community College Major Requirements

Route I: Designed for the student without previous college and/or medical work who wishes to obtain the Associate of Science degree and certificate in Respiratory Care. Required coursework includes Respiratory Care 172, 174, 176, 178, 280, 282, 284, 286, 288, Anatomy 30, Computer Information Systems 13, English 1A and Psychology 5. Students without previous medical training are strongly advised to complete Respiratory Care 170 before enrolling in Respiratory Care 172 or 174.
Total Units: 60
Route II: Designed for the student planning to transfer to a university advanced-level respiratory care program after completion of the El Camino College entry-level program. Required coursework includes Respiratory Care 172, 174, 176, 178, 280, 282, 284, 286, and 288. In addition, students must meet current coursework requirements (see program director or counselor) for transfer to Loma Linda University or other Respiratory Care bachelor's degree programs. Students without previous medical training are strongly advised to complete Respiratory Care 170 before enrolling in Respiratory Care 172 or 174.
Total Units: 46

Certificate of Achievement
A Certificate of Achievement is granted to the student who completes the following route:
Route III: Designed for the student with previous college coursework equivalent to an associate degree or higher, and/or with medical education and credentials who wishes to obtain the certificate in Respiratory Care. The student must have the equivalent of an associate degree or higher in order to be granted the certificate. Take, or pass through credit-by-examination**, Respiratory Care 172, 174, 176, 178, 280, 282, 284, 286, 288 and transfer in, or have evaluated as equivalent, or pass through credit-by-examination**, Anatomy 30, Computer Information Systems 13, English 1A, and Psychology 5. Students without previous medical training are strongly advised to complete Respiratory Care 170 before enrolling in Respiratory Care 172 or 174.
Total Units: 62

**No matter which route is taken, the certificate in Respiratory Care is not granted unless the student completes the Respiratory Care course requirements and has accumulated college credit equivalent to an associate's degree (with a minimum grade of C in all courses). This includes those non-respiratory courses required by the Respiratory Care Program and the State of California Respiratory Care Board.*
***See college and program credit-by-examination policy, procedures, and limitations.*

(Continued on next page)

Respiratory Care 170
Introduction to Respiratory Care Sciences and the Profession
2 units; 2 hours lecture
Recommended Preparation: Medical Assistant 4; eligibility for English 1A and Mathematics 40
Enrollment Limitation: high school graduation or equivalent
Credit, degree applicable
This course provides students an opportunity to see if their attitudes, aptitudes and interests are matched to those needed by successful respiratory care practitioners. The course reviews all the requirements for successful completion of the program and entrance into the health care industry. The course will also provide the student with an introduction to the basic sciences as they apply in the Respiratory Care profession.

Respiratory Care 172
Fundamentals of Cardiopulmonary Physiology and Pharmacology in Respiratory Care
3 units; 3 hours lecture
Prerequisite: Anatomy 30 with a minimum grade of C or concurrent enrollment
Recommended Preparation: Respiratory Care 170 with a minimum grade of C or concurrent enrollment
Enrollment Limitation: high school graduation or equivalent
Credit, degree applicable
This course will cover the fundamental cardiopulmonary anatomy, physiology, and pharmacology required for entry-level practice in the Respiratory Care profession. In addition, emphasis will be placed on the achievement and maintenance of bronchial hygiene in patients with respiratory disorders through the use of airway care, aerosols, and chest physiotherapy.

Respiratory Care 174
Introduction to Respiratory Care Equipment and Patient Care Procedures
3 units; 1 hour lecture, 6 hours lab
Recommended Preparation: Respiratory Care 170 with a minimum grade of C
Enrollment Limitation: high school graduation or equivalent
Credit, degree applicable
This course will review operational concepts and procedures for respiratory care equipment. The student will get hands-on experience selecting, assembling and checking respiratory care equipment for proper function, operation and cleanliness. The course will also provide experience performing and understanding the purpose of basic care procedures such as charting, vital signs, bed operation and other respiratory care related basic patient care procedures.

Respiratory Care

(Continued from previous page)

General Information

Recommended Preparation Course Sequence and Prerequisites

The program has two phases that require specific courses and sequence.

Preclinical Phase
In the pre-clinical phase of the program the student takes all the non-clinical Respiratory Care courses which may include Respiratory Care 170. The student shall also complete, at a minimum, Respiratory Care 172 and 174, Anatomy 30, Computer Information Systems 13, English 1A and the associate's degree mathematics competency. In addition, due to the rigorous schedule in the clinical phase, it is recommended the student complete all the other general education and science courses required for the associate of science degree. (See program director or counselor.)

Admission to the Clinical Phase
Admission to the clinical phase of the program is limited by clinical space and budget consideration. In order to gain admittance to the clinical phase of the program, the student must complete the preclinical phase with a minimum grade of C in all courses. The student must also submit a program application and completed physical exam form with the required lab tests and readiness for clinical duties certified by an appropriate health care professional. Students may submit completed applications and physical exam forms when all the required preclinical coursework is completed. Applications are accepted by the program director up to the last day of the spring and fall semesters and students are randomly assigned seats in the next clinical class based on verification of all required coursework and available space. A new clinical class starts in the spring semester each year.

Clinical Phase
In the clinical phase of the program the student takes all the combined Respiratory Care science classroom and clinical courses required to receive the Respiratory Care program certificate which, at a minimum, includes Respiratory Care 176 through 288. In addition, the student must complete all other courses required for the associate of science degree if they have not been completed in the preclinical phase.

Cost
In addition to any fees or charges imposed by the college, it is estimated that the cost of books, lab costs, stethoscopes and miscellaneous supplies is approximately six hundred dollars over a two-year period. Financial assistance is available to students who meet the eligibility requirements. A health physical examination is required.

Admission Requirements and Length of Program
For the high school graduate with a C average or better in science and math, the program will take 2 1/2 years to complete, including all prerequisites. A student is formally accepted into the clinical phase of the program after satisfactory completion of prerequisites, general education courses and introductory respiratory care science courses.

Procedure for Admission
The student should apply for a reservation to register at El Camino College. An appointment with a Health Science counselor should be made so that the matriculation process can be completed. Students wishing to take advanced college work after graduation may choose a specific general education track. All respiratory care science and clinical courses must be taken and completed with at least a C or better.

Respiratory Care 176
Introduction to Respiratory Care of the Non-Critically Ill Patient
5 units; 2 hours lecture, 9 hours lab per week to be arranged
Prerequisite: Respiratory Care 172 and 174 with a minimum grade of C in prerequisite
Recommended Preparation: Computer Information Systems 13; Psychology 5
Enrollment Limitation: admission to Respiratory Care Program requiring completed application and physical exam forms indicating readiness for clinical practice as a Respiratory Care Practitioner
Credit, degree applicable
This course deals primarily with the non-critically ill adult patient. It will provide the student with cognitive and psychomotor practice performing basic respiratory care in Health Service Organizations in the South Bay Area. Students receive most of their classroom/cognitive instruction at El Camino College and are rotated during day, evening, and/or night shifts to ECC's clinical affiliates such as Harbor UCLA Medical Center, Memorial of Gardena Hospital, Torrance Memorial Medical Center, Robert F. Kennedy Medical Center, Little Company of Mary Medical Center and Daniel Freeman Memorial Hospital.
Note: It is strongly advised that all non-respiratory care courses required for the Respiratory Care Associate in Science degree be completed prior to enrollment in this course.

Respiratory Care 178
Respiratory Care of the Critically Ill Patient I
7 units; 7 hours lecture, 27 hours lab per week to be arranged
(8 weeks course)
Prerequisite: Respiratory Care 176 with a minimum grade of C
Credit, degree applicable
This course is an introduction to the practice of respiratory care in intensive care units with an emphasis on patient ventilator interaction. The student will manage critically ill patients on prolonged artificial ventilation using micro processor-driven ventilators, alarms, arterial blood gases and other appropriate techniques and equipment. Students are rotated through evening, nights and day critical care units in hospitals.

Respiratory Care 280
Respiratory Care of the Critically Ill Patient II
9 units; 4 hours lecture, 15 hours lab per week to be arranged
Prerequisite: Respiratory Care 178 with a minimum grade of C
Credit, degree applicable
This course continues with the treatment and management of adult patients that are critically ill. The course provides the student with the opportunity to develop more complex reasoning and patient care skills. Problem-oriented use of patient data including intermediate respiratory care assessment and decision-making using blood gases, x-rays, response to therapy and other appropriate clinical indicators will be emphasized.

Respiratory Care 282
Fundamentals of Perinatal and Pediatric Respiratory Care
4 units; 2 hours lecture, 6 hours lab per week to be arranged
Prerequisite: Respiratory Care 178 with a minimum grade of C
Credit, degree applicable
This course will introduce the student to the basic anatomy and physiology of the fetus, neonate and pediatric patient. The student will learn the fundamental therapeutic procedures, equipment and data used to provide pediatric and perinatal respiratory care. Pediatric basic and advanced life support will also be taught in the classroom, lab and clinical setting.

Respiratory Care 284
Respiratory Care of the Critically Ill Patient III
9 units; 4 hours lecture, 15 hours lab per week to be arranged
Prerequisite: Respiratory Care 280 with a minimum grade of C
Credit, degree applicable
This course continues with the treatment and management of adult patients that are critically ill. The course provides the student with the opportunity to develop more complex reasoning and patient care skills. A disease-directed approach is used with emphasis on respiratory failure, chronic obstructive pulmonary disease and related respiratory conditions and deadspace problems. The course reviews the problems of nosocomial infections in respiratory care and systematic methods for identifying and correcting patient-therapist equipment contamination. Communication skills are introduced that will help the therapist relay suggestions and information to other members of the health care team.

Respiratory Care 286
Fundamentals of Pulmonary Rehabilitation and Home Respiratory Care
3 units; 2 hours lecture, 3 hours lab per week to be arranged
Prerequisite: Respiratory Care 280 with a minimum grade of C
Credit, degree applicable
This course focuses on the treatment and management of adult patients that have chronic respiratory conditions and diseases. The course provides the student with the opportunity to develop skills managing patients requiring pulmonary rehabilitation and home respiratory care. The problem-oriented approach to developing a Respiratory Care plan will be covered emphasizing the use of, and the ability to collect, patient data. Skills to be learned will include performance of a physical exam of the patient, arterial puncture, establishment of intravenous fluid lines, exercise evaluation, patient education and prevention of infection.

Respiratory Care 288
Fundamentals of Pulmonary Function Testing
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Respiratory Care 176 with a minimum grade of C
Credit, degree applicable
This course will review the fundamental procedures and equipment used to measure pulmonary function in non-symptomatic populations and in populations of people with chronic pulmonary diseases. Operation, calibration, and quality control of arterial blood analysis and respiratory exhaled air collection will be provided through hands-on experience at the college and at health service organizations' diagnostic laboratories. Skills to be learned will include performance of arterial blood gas analysis, public health screening and diagnostic pulmonary function testing.

School Health Clerk – Certificate of Achievement

(Health Sciences and Athletics Division)

By completing the certificate requirements, students will acquire proficiency in the role of the school health clerk paraprofessional. Students will gain knowledge of the legal and ethical responsibilities within the school health clerk role; communication skills; health and wellness concepts; chronic and acute health conditions; psycosocial problems; common treatment protocols; first aid and CPR techniques; health information and office management; and disaster planning. Observational experiences focusing on the roles and responsibilities of school health clerks will be provided in local school districts. Certificate competencies will be assessed regularly through written assignments and examinations. The curriculum prepares students for entry-level school health clerk positions within school districts and various community agencies.

Certificate of Achievement
A Certificate of Achievement will be granted upon completion of the courses listed below. A minimum of 12 units of the certificate requirements, including Nursing 110, 112, and 114, must be completed at El Camino College.
Child Development 3, 10, 11, Nursing 110, 112, 114; three units from: Child Development 4, 7, 8, 9, 32, 34, 45, 160, 163, 166, Nursing 116, 118, Nutrition and Foods 15, Sign Language/Interpreter Training 15
Total Units: 18

Secretarial

See Business

Shop Mathematics

See Technical Mathematics

Sign Language/ Interpreter Training

Sign Language/Interpreter Training 15
Beginning American Sign Language
3 units; 2 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This beginning course in American Sign Language (ASL) is taught within the context of deaf culture. The course offers instruction and practice with basic grammatical features of ASL. Primary emphasis of the class is on developing comprehension skills, vocabulary development, and visual readiness. It is recommended for those who wish to prepare for professional or social contact with the deaf. It is the first course of a sequence leading toward competency as a professional interpreter.
Note: This course is comparable to two years of high school sign language.

Sign Language/Interpreter Training 16
Intermediate American Sign Language
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Sign Language/Interpreter Training 15 with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is recommended for students who wish to continue their study of the deaf culture and increase their ability to communicate in American Sign Language (ASL). This course focuses on ASL structure and grammatical features as used by native signers. It will develop language fluency at the intermediate level. This course is required for those continuing in the sequence leading toward professional competency as an interpreter.
Note: The prerequisite for this course is comparable to two years of high school sign language.

Sign Language/Interpreter Training – A.A. Degree and Certificate of Achievement

(Health Sciences and Athletics Division)

Upon completion of the degree or certificate, the student will be prepared for entry-level jobs interpreting in the educational, medical, and community settings. Students will obtain instruction in general communication skills for working with deaf and hearing-impaired individuals as well as acquire an understanding of the deaf culture. In the interpreting-level courses, students will gain technical skills, poise, and proficiency. The student will develop speed and accuracy in both simultaneous and consecutive interpreting. Skills will be assessed through regular examinations, mock interviews, and portfolio review. Program assessment is conducted by monitoring student employment rates.

El Camino College Major Requirements
Sign Language/Interpreter Training 15, 16, 17A, 17B, 18A, 18B, 19, 20, 201 or 202, 214, 263, 264; choose one: Child Development 150, Speech Communication 1, Theatre 8, 30
Total Units: 32

Certificate of Achievement
A Certificate of Achievement will be granted to the student who completes the courses listed below.
Sign Language/Interpreter Training 15, 16, 17A, 17B, 18A, 18B, 19, 20, 201 or 202, 214, 263, 264, English 1A; choose one: Child Development 150, Speech Communication 1, Theatre 8, 30
Total Units: 36

The hours per week of courses may be adjusted based on the length of the term.

Sign Language/Interpreter Training 17A

Advanced American Sign Language

3 units; 2 hours lecture, 3 hours lab
Prerequisite: Sign Language/Interpreter Training 16 with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC

This course is designed for students who wish to develop technical and grammatical knowledge of American Sign Language at the advanced level. Taught within the context of deaf culture, students will increase their ability to communicate in American Sign Language (ASL). This course focuses on ASL structure and grammatical features as used by native signers. Multimedia presentations, activities, and exercises are designed to develop language fluency for communicating with members of the deaf community. This course is required for those continuing in the sequence leading toward professional competency as an interpreter.

Note: The prerequisite for this course corresponds to three years of high school sign language.

Sign Language/Interpreter Training 17B

Advanced American Sign Language: Comprehending ASL

3 units; 2 hours lecture, 3 hours lab
Prerequisite: Sign Language/Interpreter Training 17A with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC

This course uses multimedia presentations, activities, and exercises for advanced practice using American Sign Language. The course will provide students with cultural information and current linguistic research. This advanced course is designed to help students comprehend American Sign Language and its grammatical features.

Sign Language/Interpreter Training 18A

Fundamentals of Interpreting and Translating

3 units; 2 hours lecture, 3 hours lab
Prerequisite: Sign Language/Interpreter Training 17B with a minimum grade of C
Corequisite: enrollment in Sign Language/Interpreter Training 263
Credit, degree applicable
Transfer CSU

This course is designed to bring students to a beginning level of fluency for general interpreting and transliterating situations. The focus will be on both consecutive and simultaneous modes of delivery of Code of Ethics and preparation for certification with the Registry of Interpreters for the Deaf.

Sign Language/Interpreter Training 18B

Applied Interpreting and Translating Technique

2 units; 1 hour lecture, 3 hours lab
Prerequisite: Sign Language/Interpreter Training 18A with a minimum grade of C
Credit, degree applicable
Transfer CSU

This is an advanced skills development course designed to provide interpreting practice in specific areas such as deaf-blind interpreting, medical interpreting, legal interpreting and educational interpreting. The focus will be on the execution of skills in both consecutive and simultaneous interpreting modes and the transliterating mode.

Sign Language/Interpreter Training 19

Advanced Interpreting: Sign to Voice

3 units; 2 hours lecture, 3 hours lab
Prerequisite: Sign Language/Interpreter Training 18B with a minimum grade of C
Corequisite: enrollment in Sign Language/Interpreter Training 264
Credit, degree applicable
Transfer CSU

This course is designed primarily for the development of Reverse Interpreting Skills (Sign to Voice). Reverse interpreting consists of conversion of manual sign language systems into spoken language. Students will develop skills necessary for simultaneous delivery of sign to voice translating and sign to voice interpreting. This class will enhance understanding, reading and verbal presentation of American Sign Language and other modes of manual communication.

Sign Language/Interpreter Training 20

Interpreting Practicum

3 units; 2 hours lecture, 3 hours lab to be arranged
Prerequisite: Sign Language/Interpreter Training 18A with a minimum grade of C
Credit, degree applicable
Transfer CSU

This course provides practical interpreting experience for students completing the Sign Language/Interpreter Training Program. The course includes field work and classroom attendance. Activities and exercises are designed to guide the student through steps of establishing a freelance interpreting business. Discussions and lectures will concentrate on the issues and concerns that arise during the practice assignments.

Sign Language/Interpreter Training 22

Educational Interpreting

2 units; 1 hour lecture, 3 hours lab
Prerequisite: Sign Language/Interpreter Training 18A with a minimum grade of C
Credit, degree applicable

This course will prepare students for interpreting in the educational field. It will prepare students for the roles needed to function in the K-12 setting as well as enhance their knowledge of technical and academic sign language vocabulary for high school and college. This course is strongly recommended for students interested in interpreting for schools, vocational programs, colleges, and universities.

Sign Language/Interpreter Training 50

Special Topics in Sign Language/Interpreter Training

Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course

This course is designed to explore topics in Sign Language/Interpreter Training more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

The hours per week of courses may be adjusted based on the length of the term.

Sign Language/Interpreter Training 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Sign Language/ Interpreter Training field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Sign Language/Interpreter Training 101abcd
Individualized American Sign Language Laboratory
1 unit; 3 hours lab to be arranged
Prerequisite: Sign Language/Interpreter Training 15 or concurrent enrollment
Credit, not degree applicable
This course is designed to provide individualized instruction in a laboratory setting using self-paced prescriptive course work and videotapes. This course will also provide additional receptive and expressive practice in American Sign Language.
Note: Pass/no pass only.

Sign Language/Interpreter Training 201
Perspective on Deafness
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
Transfer CSU
In this course students will explore the realm of deafness from both a hearing and deaf perspective. Current topics and issues include sign language, acquisition of language, educational trends, and experiments and research. Students will gain an understanding of psychological and social implications of deafness.

Sign Language/Interpreter Training 202
Cultural Issues of the Deaf Community
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84
Credit, degree applicable
This course is designed to explore the anthropologic, political, and linguistic aspects of the culture of the deaf. Discussion and topics will provide the student with an understanding of the issues of being a deaf individual in a hearing world and trends of the deaf culture.

Sign Language/Interpreter Training 214
Fingerspelling and Numerical Concepts
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU
This course is designed to provide beginning and advanced practice with the sign language component known as fingerspelling. Through the use of video tapes, drills, and exercises, the student will receive practice in comprehending and using the manual alphabet and numerical signs.
Note: Pass/no pass only.

Sign Language/Interpreter Training 263
Interpreting/Transliterating Laboratory
1 unit; 3 hours lab
Prerequisite: Sign Language/Interpreter Training 17B with a minimum grade of C
Corequisite: Sign Language/Interpreter Training 18A
Credit, degree applicable
Transfer CSU
This class is designed for students seeking advanced practice in a lab setting to further enhance interpreting and transliterating skills. Video tapes, exercises, and practice will increase vocabulary and terminology in both English and sign. The student will receive additional practice with consecutive and simultaneous interpretation.
Note: Pass/no pass only.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Sign Language/Interpreter Training 264
Sign to Voice Laboratory
1 unit; 3 hours lab
Prerequisite: Sign Language/Interpreter Training 18A and Sign Language/Interpreter Training 263 with a minimum grade of C in prerequisite
Corequisite: Sign Language/Interpreter Training 19
Credit, degree applicable
Transfer CSU
This course provides advanced practice in a lab setting. It will enhance sign to voice interpreting and translating skills. The student will view video tapes, participate in exercises and activities designed to increase comprehension skills and spoken presentations. Students will also practice both sign to voice consecutive and simultaneous interpreting.
Note: Passno pass only.

Sociology

Sociology 50
Special Topics in Sociology
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Sociology more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Sociology 96abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Sociology field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Sociology – A.A. Degree

(Behavioral and Social Sciences Division)

The sociology degree provides students with a foundation in the science of sociology. Upon successful completion of the program requirements, the student will acquire an understanding of major sociological concepts and theoretical perspectives on social problems and social life as they apply to the individual, group, and society. Students will also understand the principles of research methods and data analysis. The major prepares students for careers in fields such as teaching, research, social work, public relations, and counseling. Students will demonstrate their proficiency in sociological competencies through examinations and writing assignments on the major sociological theories and research techniques.

El Camino College Major Requirements
Anthropology 2, Sociology 101, 104; Mathematics 150 or Psychology 9A or Sociology 109; two courses from: Anthropology 9, Philosophy 2, 3, 5, 8, Psychology 5, 10, 12, 16, Sociology 102, 107, 112, 115
Total Units: 19

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Sociology 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Sociology with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides advanced studies in a subject field of Sociology not covered in the regular departmental offerings. Regular conferences will be held with the instructor to discuss and coordinate the assigned projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Sociology 101
(formerly 5)
Introduction to Sociology
3 units; 3 hours lecture
Prerequisite: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course students analyze the influence of the social environment on behavior and social life using sociological theoretical perspectives. Components of social structure and social culture are critically examined through sociological theories and concepts including socialization, deviance, social institutions, and social change. Inequalities based on issues such as social class, race, ethnicity, gender, and age will also be analyzed.

Sociology 102
(formerly 2)
The Family
3 units; 3 hours lecture
Recommended Preparation: Sociology 101; eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course covers the sociological and psychological components of family living practiced in the United States and in various cultures worldwide. Topics include singlehood, love, cohabitation, marriage, divorce, cultural and historical variation, communication, and conflict resolution.

Sociology 104
(formerly 4)
Social Problems
3 units; 3 hours lecture
Recommended Preparation: Sociology 101; eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course social problems facing societies today are examined. Topics include problems associated with deviance, crime, inequality, social institutions, and modernization. Social problems will be analyzed from various sociological perspectives to better understand their possible causes and consequences. Strategies for addressing social problems will be discussed and assessed.

Sociology 107
Race and Ethnicity in United States Society
3 units; 3 hours lecture
Recommended Preparation: Sociology 101; eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course introduces students to the sociological study of race and ethnic relationships in American society. Sociological concepts and theories are used to analyze the recent and historical experiences of groups which have been defined in racial and ethnic terms. The focus of the course will be on the origins and consequences of these definitions for the life experiences and opportunities of these groups.

Sociology 108
Global Perspectives on Race and Ethnicity
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A, Sociology 101 or Sociology 107 or Anthropology 2
Credit, degree applicable
Transfer CSU
In this course students will examine ethnic groups around the world using concepts of race, ethnicity and minority status. Multiple theoretical perspectives will be used to examine the conditions under which certain ethnic groups have been designated with minority group status. Focus is given to the reactions of these groups to this designation, and the patterns of interaction between minority groups and dominant groups. Emphasis is on current situations involving minority-dominant group relations around the world and the historical conditions influencing them.

Sociology 109
(formerly 9)
Introduction to Elementary Statistical Methods for the Study of Behavior
4 units; 3 hours lecture, 3 hours lab
Prerequisite: Sociology 101 or Psychology 5 and Mathematics 70 with a minimum grade of C in prerequisite
Credit, degree applicable
*Transfer CSU, UC**
This is a course in statistical methods and research design for the behavioral sciences. The course focuses on descriptive and inferential statistical techniques for summarizing research data and for making conclusions about the populations they represent. Students are introduced to the basic challenges and skills involved in successful undergraduate and graduate training in the behavioral sciences, including both reviewing and writing scientific research reports.
Note: This course is the same as Psychology 9A.
**Note: The maximum UC credit allowed for students completing Sociology 109 and Psychology 9A or Sociology 109 and Mathematics 150 is one course.*

Sociology 110
(formerly 10)
Introduction to Social Work
3 units; 3 hours lecture
Recommended Preparation: Sociology 104
Credit, degree applicable
Transfer CSU
This course introduces students to the field of social work emphasizing the skills, responsibilities, and varieties of social work settings. Various social problems, such as child neglect, domestic violence, and poverty, are analyzed to understand how social workers address these issues at the individual, group, and community levels. Social policies such as domestic violence laws, foster care, and the welfare system are also examined.

Sociology 112
Introduction to Criminology
3 units; 3 hours lecture
Recommended Preparation: Sociology 101; eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course introduces students to the scientific analysis of crime and criminality. Sociological concepts and theories are used to analyze the nature, extent, and cause of crime; theoretical explanations for criminal behavior will be discussed. The dynamics of law, social control, treatment processes, and victimology will be evaluated.

Spanish – A.A. Degree
(Humanities Division)

By completing the degree requirements, the student will acquire proficiency in speaking, reading, writing, and understanding Spanish and will gain knowledge of Spanish and Spanish-American culture. The student will be able to communicate in Spanish, write formal compositions, and read the text of Spanish and Spanish-American authors, all at the intermediate-mid level of competency. Competencies will be assessed throughout the language sequence with written and oral exams. This major provides career opportunities where knowledge of Spanish is useful and prepares students for continued advanced learning of Spanish.

The student who has completed two or more years of Spanish in high school will have the opportunity to enroll with advanced standing and to complete semesters 5 and/or 6 at El Camino College. It is recommended that language majors enroll in conversation classes.

El Camino College Major Requirements
0-8 units from Spanish 1 and 2 or 0-6 units from Spanish 52A and 52B; Spanish 3, 4, 5, 6; one course from the following: Anthropology 7, Art 7, English 42, History 17, 19
Total Units: 20-28

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Spanish

Spanish 1
Elementary Spanish I
4 units; 5 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
*Transfer CSU, UC**
This beginning course, taught within the context of Spanish and Spanish-American culture, introduces students to listening, speaking, reading and writing elementary Spanish. Students develop pronunciation and speaking skills along with their understanding of spoken Spanish. Computer programs and audio and video tapes are available to reinforce the language skills acquired in the classroom.
Note: This course is comparable to one year of high school Spanish.
**Note: The maximum UC credit allowed for students completing Spanish 1 and Spanish 52A and 52B is four units.*

Spanish 2
Elementary Spanish II
4 units; 5 hours lecture
Prerequisite: Spanish 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course, taught within the context of Spanish and Spanish-American culture, is a continuation of the study of elementary Spanish with an emphasis on listening, speaking, reading and writing. Students improve their pronunciation and speaking skills along with their understanding of spoken Spanish. Computer programs and audio and video tapes are available to reinforce the language skills acquired in the classroom.
Note: The prerequisite for this course is comparable to one year of high school Spanish.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Spanish 3
Intermediate Spanish I
4 units; 5 hours lecture
Prerequisite: Spanish 2 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This intermediate course, taught within the context of Spanish and Spanish-American culture, emphasizes the study of the essentials of Spanish grammar and the fundamentals of formal Spanish composition. Through oral and written practice, students expand their Spanish vocabulary and use of idiomatic expressions. Student read materials of representative Spanish and Spanish-American authors.
Note: The prerequisite for this course is comparable to two years of high school Spanish.

Spanish 4
Intermediate Spanish II
4 units; 5 hours lecture
Prerequisite: Spanish 3 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This course, taught within the context of Spanish and Spanish-American culture, is a continuation of the study of essential Spanish grammar and formal composition. Through oral and written practice, students further expand their Spanish vocabulary and use of idiomatic expressions. Students read materials of representative Spanish and Spanish-American authors and participate in daily conversations.
Note: The prerequisite for this course is comparable to three years of high school Spanish.

Spanish 5
Advanced Spanish I
3 units; 3 hours lecture
Prerequisite: Spanish 4 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This advanced course, taught within the context of Spanish and Spanish-American culture, is a survey of literature written by Spanish and Spanish-American writers. Students read and summarize the works of representative Spanish and Spanish-American writers to acquire fluency in the language. Written Spanish, with an emphasis on vocabulary building and functional grammar, is also included.

Spanish 6
Advanced Spanish II
3 units; 3 hours lecture
Prerequisite: Spanish 4 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU, UC
This advanced course, taught within the context of Spanish and Spanish-American culture, introduces students to Spanish and Spanish-American literary criticism. Students learn how to write critically about the works of representative Spanish and Spanish-American writers to acquire fluency in the language. Written Spanish, with an emphasis on vocabulary building and functional grammar, is also included.

Spanish 21ab
Beginning Conversational Spanish
2 units; 2 hours lecture
Prerequisite: Spanish 1 with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course is designed to develop competency in oral expression, oral comprehension, and conversational strategies.

Spanish 22ab
Intermediate Conversational Spanish
2 units; 2 hours lecture
Prerequisite: Spanish 2, Spanish 21ab with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU, UC
This course is designed for the intermediate student to develop greater fluency in oral expression, increase oral comprehension, and improve pronunciation. Conversational topics are based upon the daily experiences and cultural life of the ethnic areas involved with the language.

Spanish 24
Introduction to Spanish and Latin American Language and Cultures
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course provides an introduction to the cultural aspects of the Spanish language through a study of Spanish and Latin American culture, geography, social institutions, literature, art, architecture, and music. Topics include a comparison of Spanish and other Western languages and cultures.

Spanish 50
Special Topics in Spanish
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Spanish more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Spanish 52A
Spanish for Native Speakers
3 units; 3 hours lecture
Credit, degree applicable
*Transfer CSU, UC**
This course is designed for students with a native-speaking knowledge of Spanish and who have had little or no formal instruction in the Spanish language. The emphasis is on correct spoken and written Spanish free from regionalism and Anglicisms. Special attention is given to correcting faulty speech habits, improving vocabulary, and acquiring skills in writing. Students also become familiar with the similarities and differences existing within and between the cultures of Spain and Spanish America.
**Note: The maximum UC credit allowed for students completing Spanish 1 and Spanish 52A and 52B is four units.*

Spanish 52B
Spanish for Native Speakers
3 units; 3 hours lecture
Prerequisite: Spanish 52A with a minimum grade of C or equivalent
Credit, degree applicable
*Transfer CSU, UC**
This course is designed for students with a native-speaking knowledge of Spanish and who have some formal instruction in the Spanish language. The emphasis is on correct spoken and written Spanish free from regionalism and Anglicisms. Special attention is given to correcting faulty speech habits, improving vocabulary, and acquiring skills in writing. Students also become familiar with the similarities and differences existing within and between the cultures of Spain and Spanish America.
**Note: The maximum UC credit allowed for students completing Spanish 1 and Spanish 52A and 52B is four units.*

The hours per week of courses may be adjusted based on the length of the term.

Spanish 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Spanish with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides special advanced studies in a subject field of Spanish education not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Spanish education projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Special Education
See Educational Development

Speech Communication

Speech Communication 1
Effective Speaking
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course covers the fundamentals of speech communication. Emphasis is placed on organization, evidence, logic, and performance techniques. Students will organize and present speeches based on various topics and applications.

Speech Communication 3
Group Discussion
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course student will plan and participate in a variety of group projects such as panel and symposium discussions. Topics to be covered include decision making, role identification, interpersonal needs within a group, team participation, appropriate interdependency on group members, effective leadership skills, cohesiveness, conflict resolution and professional presentation styles.

Speech Communication – A.A. Degree and Certificate of Achievement
(Fine Arts Division)

The degree and certificate provide students with a thorough foundation in the theory and practice of communication studies. This is achieved through a variety of courses that serve to develop personal, business, and professional communication skills in individual, interpersonal, and group situations, along with skills in research, organization, critical thinking, argumentation, and forensics. Students will demonstrate their proficiency through performance, class projects, research papers, objective tests, critiques, and competitions. Program assessment is measured by completion, evaluation of student learning outcomes, transferability, competitions at the local, state, and national levels, and periodic program review.

El Camino College Major Requirements
Speech Communication 1, English 1A; a minimum of 15 units from Speech Communication 3, 4, 5, 7, 8, 12, 14, 24abcd, 25abcd (four semesters of Speech Communication 24abcd and four semesters of Speech Communication 25abcd can be applied toward the major requirements)
Total Units: 22
At least 12 units must be completed at El Camino College.

Certificate of Achievement (pending approval by the California Community Colleges System Office): A Certificate of Achievement will be granted upon completion of the courses listed below. At least 12 units must be completed at El Camino College.
Speech Communication 1, 3, 99abc (1 unit); select a minimum of 11 units from: Speech Communication 4, 5, 7, 8, 9, 12, 14, 24abcd, 25abcd, 99abc (1-2 units)
Total Units: 18

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Speech Communication 4
Argumentation and Debate
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU, UC
This course introduces students to the construction of arguments for debate and other speech presentations. Emphasis is placed on analyzing claims, developing arguments that support and refute propositions, and effective delivery. Identification of types of argument and fallacies of reasoning are explored. Controversial issues are discussed, researched, and debated.

Speech Communication 5
Mass Communication
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
*Transfer CSU, UC**
In this course students study the history, effects, and role of the mass media in U.S. society. Topics include major forms of mass communication such as television, radio, cinema, print and new media. Emphasis is placed on analyzing media messages and the effects of media on the individual and U.S. culture.
Note: The maximum UC credit allowed for students completing Speech Communication 5 and Journalism 12 is one course.

The hours per week of courses may be adjusted based on the length of the term.

Speech Communication 7
Voice, Articulation and Pronunciation
3 units; 3 hours lecture
Credit, degree applicable
Transfer CSU, UC
In this course, students examine the use of spoken Standard American English. Emphasis is placed on personal improvement of spoken English through drills utilizing the International Phonetic Alphabet. Also included is an overview of the physiological processes of speech and other forms of spoken English.

Speech Communication 8
Oral Interpretation of Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course, students will study how to orally interpret literature through reading poetry, drama, short stories, and essays. Emphasis will be placed on the techniques of exploring, illuminating, and orally presenting the logical, emotional, and aesthetic meanings of literature.

Speech Communication 9
Readers Theatre
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This course introduces students to the medium of readers theatre. Students will evaluate, analyze, synthesize, and perform a variety of different texts for the purpose of creating, staging, and performing a readers theatre. Emphasis is placed on experimental presentations and the development of analytical insight into literary forms.

Speech Communication 12
Interpersonal Communication
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
In this course students study and apply methods and theories of interpersonal communication such as self-concept, perception, emotions, language and gender differences, non-verbal communication, listening, intimacy, defensiveness, and conflict resolution. Students are required to give formal and informal oral presentations and write reports.

Speech Communication 14
Introduction to Intercultural Communication
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer, CSU, UC
This course examines general communication principles and cross-cultural communication styles, and presents in-class activities to enhance cross-cultural communication.

Speech Communication 24abcd
Forensic Workshop
1 unit; 3 hours lab
Credit, degree applicable
Transfer CSU
Students will be introduced to competitive public speaking, including debate, platform speeches, limited-preparation speaking, and oral interpretation of literature. Students will have the opportunity to observe and participate in forensic competitions.

Speech Communication 25abcd
Forensic Team
1 unit; 3 hours lab
Enrollment Limitation: audition
Credit, degree applicable
Transfer CSU
This course provides instruction, rehearsal, and preparation for intercollegiate forensic competition. Students must audition to become members of the forensic team. Competition at forensic tournaments is based upon skill and preparation.

Speech Communication 50
Special Topics in Speech Communication
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Speech Communication more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Speech Communication 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Speech Communication with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides special advanced studies in a subject field of Speech Communication not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Speech Communication projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Supervision

Supervision 27
Oral Business Communications
3 units; 3 hours lecture
Recommended Preparation: eligibility for English A
Credit, degree applicable
Transfer CSU
In this course students will learn the principles of effective speaking in business situations. Interviews, conferences, briefings, and group discussions will be covered. Techniques of research, preparation, presentation, and evaluation are emphasized.
Note: This course is the same as Business 29.

Surgical Technology

Surgical Technology 121
Application of Operating Room Techniques
5 units; 15 hours lab per week to be arranged
Prerequisite: Surgical Technology 110 and Surgical Technology 111 with a minimum grade of C in prerequisite or equivalent
Corequisite: Surgical Technology 120
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
This is a laboratory course where the student is able to apply the concepts of aseptic techniques, microbiology and patient care in an operating room environment. Focus is placed on the sub-specialties of eye, ear, nose, throat, neurology, urology, pediatrics and plastic surgery. The student will gain beginning clinical experiences as a first or second scrub. The application of legal/ethical concepts will be integrated in all clinical situations. Instrumentation procedures and specialty equipment/supplies of the sub-specialties will be practiced in both simulated and real clinical situations.

Surgical Technology 130
Current Concepts in Surgical Technology
2 units; 2 hours lecture
Prerequisite: Surgical Technology 120 with a minimum grade of C
Corequisite: Surgical Technology 140
Recommended Preparation: eligibility for English 1A
Credit, not degree applicable
This course covers current topics and concerns encountered in the surgical setting. Surgical practice regarding personal and professional relations as well as the significance of professional organizations will be presented. The importance of legal/ethical concepts will be integrated throughout the course. Eligibility for the National Certification Examination given by the Liaison Council on Certification for the Surgical Technologist (LCC-ST) will be discussed.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Surgical Technology 140
Practicum: Surgical Specialties
6 units; 18 hours lab per week to be arranged
Prerequisite: Surgical Technology 120 with a minimum grade of C
Corequisite: Surgical Technology 130
Recommended Preparation: eligibility for English 1A
Credit, not degree applicable
This course continues the Surgical Technology sequence by providing supervised clinical experience in a surgical setting. Students will function as first scrub and solo scrub in selected specialities such as General, Gynecological, Orthopedic, Thoracic, and Cardiovascular surgery. Legal/ethical concepts continue to be integrated.

Technical Mathematics

Technical Mathematics 1
Technical Mathematics for Vocational Students
3 units; 3 hours lecture
Credit, degree applicable
This is a basic technical mathematics course covering prime numbers, addition, subtraction, multiplication and division of signed numbers and decimals, fractions (including mixed numbers and compound fractions), ratios, proportions, percentages, accuracy of measurements, exponents, roots, and an introduction to equations and inequalities. Applications will relate to problems commonly found in industrial settings.

Teaching

PRESCHOOL TEACHING
Child Development courses are designed primarily for students interested in working in private or public programs serving infants, toddlers, preschoolers, children with special needs, or children enrolled in before and after school care. Please refer to the course listings and program requirements in the Childhood Education section of this catalog.

ELEMENTARY SCHOOL TEACHING (Grades K-5)
Students interested in teaching elementary school must first earn a bachelor's degree, pass specific state examinations (i.e., the California Basic Education Skills Test, the California Subject Exam for Teachers, and the Reading Instruction Competence Assessment), demonstrate knowledge of the U.S. Constitution either through a course or exam, complete foundational computer technology coursework, complete a Multiple Subject Teaching Credential Program at the university level, and obtain a character clearance. Note: Though prospective elementary school teachers may select any major, the Liberal Studies major is recommended because it best prepares students for the aforementioned exams as well as for the profession itself. For this reason, El Camino College offers a Liberal Studies Program that is designed for students who plan to teach elementary school. For more information, please refer to the Liberal Studies Program in this catalog or contact the El Camino College Teacher Education Program at 310-660-3573. You may also visit the program on the Web at: www.elcamino.edu/childhood_education.

MIDDLE/HIGH SCHOOL TEACHING (Grades 6-12)
Students interested in teaching middle or high school must first earn a bachelor's degree in the subject they plan to teach, pass the California Basic Education Skills Test, pass the California Subject Exam for Teachers in their field, (if they did not earn their bachelor's degree through an approved subject matter preparation program), demonstrate knowledge of the U.S. Constitution either through a course or exam, complete foundational computer technology coursework, complete a Single Subject Teaching Credential Program at the university level, and obtain a character clearance. El Camino College offers associate in arts and associate in science degrees in a variety of majors suitable for students who wish to teach at the middle or high school level. For more information, please contact the El Camino College Teacher Education Program at 310-660-3573. You may also visit the program on the Web at: www.elcamino.edu/childhood_education.

The El Camino College Teacher Education Program (TEP) supports students seeking any of the teaching careers listed above.

Theatre – A.A. Degree and Certificate of Achievement

(Fine Arts Division)

The degree or certificate provides students with a comprehensive foundation in theatre, history, practice of theatre, and entertainment lighting. This is fulfilled through a structured program of theatre study in the areas of history, dramatic literature, acting, performance, technical theatre, entertainment lighting, and related crafts. Students will demonstrate their proficiency through acting competency, public performance, research papers, essays, class projects, and technical crew assignments. Program assessment is measured by public performances, program completion, transferability, and periodic program review. Students qualify to pursue a variety of theatre and entertainment related careers and advanced degree options.

El Camino College Major Requirements
Theatre 1, 4, 14A, 14B, 84, 90, 94; three units from: Theatre 70abcd or 97abcd (with a minimum of 1 unit from Theatre 97abcd); 2 to 3 units from: Theatre 15abcd, 16abcd, 20ab, 22ab, 30, 34ab, 36, 40A, 40B, 88, 92
Total Units: 26-27

Certificate of Achievement
Entertainment Lighting Technology: Theatre 84, 90, 195, two semesters of Theatre 97abcd, one semester of Theatre 190ab, 191ab, 192ab, 193ab, and 194ab
Total Units: 21

Preparation for the Transfer Major
For information on specific university major requirements, please obtain a transfer curriculum guide sheet in the Counseling Services Center, consult with your counselor, or visit the Transfer Center. You may use the transfer major requirements to help you fulfill your associate degree requirements.

Theatre

Theatre 1
Theatre Appreciation
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 84 or ESL 52C
Credit, degree applicable
Transfer CSU, UC

This course is a survey of theatre focusing on the theory and practice of modern theatre. Topics include acting, directing, design of scenery, architecture, lighting, costuming, makeup, stage properties, and the American musical. Elements of playwriting, critical analysis, and career opportunities are also covered. Attendance is required at selected theatre events at El Camino College presented by the Theatre Department, El Camino College Center for the Arts, and selected master classes related to professional events.

Theatre 4
Dramatic Literature
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC

In this course students survey selected plays from classical tragedy and comedy to contemporary drama. Emphasis is place on reading, discussing, and critically analyzing dramatic literature influenced by social and cultural forces. Attendance at selected local theatre events is required.

Theatre 8
Introduction to Acting
3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 84 or ESL 52C
Credit, degree applicable
Transfer CSU, UC

Designed for the non-theatre major, this course introduces the fundamental elements and techniques of acting. Emphasis is placed on the development of effective acting techniques through the application of physical and vocal exercises, improvisation and pantomime, and culminates with the performance of scenes from selected plays. Attendance is required at selected theatre events presented by the El Camino College Center for the Arts.

Theatre 14A
Fundamentals of Acting
3 units; 2 hours lecture, 3 hours lab
Recommended Preparation: eligibility for English 84 or ESL 52C
Credit, degree applicable
Transfer CSU, UC

This course is a study of the techniques, styles, and disciplines of acting. The student is provided theory and practical experience with varied characterizations. Emphasis is placed on individual growth and acquired skills demonstrated through play and character analysis followed by presentation of scenes from contemporary realistic plays. Attendance is required at selected theatre events offered by the El Camino College Center for the Arts.

Theatre 14B
Intermediate Acting
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Theatre 14A with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC

This course is a continuation of Theatre 14A and focuses on continued study in the methodology and process of acting for the stage and includes in-depth character study through use of personalization skills, imagery, environment, stage life, situation and motivation, given and imaginary circumstances, emotional and sense-memory recall, obstacles and objectives, throughline of action and character biographies. Attendance is required at selected theatre events at El Camino College Center for the Arts. This course is required of all theatre majors.

Theatre 15abcd
Improvisation
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: Theatre 8 or 14A
Credit, degree applicable
Transfer CSU, UC

This course introduces students to improvisational acting through games, exercises, and unrehearsed scenes. Emphasis is placed on working without a script, trusting one's instincts, and expanding one's expressive range.

The hours per week of courses may be adjusted based on the length of the term.

Theatre 16abcd
Acting: Audition and Cold Reading
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Theatre 14A with a minimum grade of C or equivalent
Credit, degree applicable
Transfer CSU
This course prepares students to audition for university placement or professional theatre. Topics will include interpreting and developing a character at the audition-ready level, completion of a portfolio and resume, interpreting assigned scripts according to the Shurtleff "Guideposts" for successful cold reading, and preparation and maintenance of at least three monologues for auditions.

Theatre 22ab
Acting Shakespeare
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Theatre 8 or 14A with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU, UC
This course focuses on the technique of understanding and playing selected works of Shakespeare through research, exercises and scene study. The student's training will include textual analysis, historical research, scansion, imagery, vocal technique and period movement, song and dance.

Theatre 40A
Fundamentals of Stage Direction
3 units; 2 hours lecture, 3 hours lab
Prerequisite: Theatre 14B with a minimum grade of C or concurrent enrollment
Credit, degree applicable
Transfer CSU, UC
This course is a study of the director's approach to play analysis, dramatic and aesthetic values, characterizations, thematic choices, casting, rehearsal techniques, and the organization of performances. The final project is the preparation and presentation of a ten-minute one-act play complete with promptbook, master movement plan, ground plan, rehearsal schedule, prop list, and a complete written play analysis. Attendance is required at selected theatre events at El Camino College offered by the Center for the Arts.

The hours per week of courses may be adjusted based on the length of the term.

Theatre 50
Special Topics in Theatre
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Theatre more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Theatre 70abcd
Beginning Theatre Production
1 unit; 3 hours lab (plus extended rehearsal hours to be arranged)
Enrollment Limitation: audition
Credit, degree applicable
Transfer CSU, UC
This theatre production course serves as an acting workshop. Students learn performance skills and rehearsal discipline through active participation in a major theatrical production. This is an intensive course with extended rehearsal hours to be arranged.

Theatre 72ab
Advanced Theatre Production
1 unit; 3 hours lab (plus extended rehearsal hours to be arranged)
Enrollment Limitation: audition
Credit, degree applicable
Transfer CSU, UC
This course is an advanced acting workshop in which students learn to enhance performance skills and rehearsal discipline through active participation in a major theatrical production. This is an intensive course with extended rehearsal hours to be arranged.

Theatre 74abcd
Musical Theatre Production
1 unit; 3 hours lab (plus extended rehearsal hours to be arranged)
Enrollment Limitation: audition
Credit, degree applicable
Transfer CSU, UC
This course is a musical theatre workshop. Students learn performance skills and rehearsal discipline through active participation in a major musical theatrical production that integrates singing, dancing, and acting. This is a time and labor intensive course with extended rehearsal hours to be arranged.

Theatre 75abcd
Student Performance Production Workshop
1 unit; 3 hours lab to be arranged
Recommended Preparation: completion of or concurrent enrollment in the following: 1. Student performers: Theatre 8 or 14A; 2. Student directors: Theatre 40A; 3. Student crews: Theatre 84 or 90 or 92 or 97abcd; eligibility for English 84
Credit, degree applicable
Transfer CSU, UC
This course is a theatre workshop in which students participate in a production under faculty supervision as directors, designers, actors, or crew.

Theatre 84
Stagecraft
3 units; 2 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course emphasizes both the theoretical and practical experience in the technical aspects of play production, including scene design, set construction, scenery painting, rigging and equipment, properties, and the manipulation of stage scenery. Students will participate in shop procedures and practices, safe tool usage, material selection, and fabrication methods. Students must attend selected theatre events at El Camino College Center for the Arts.

Theatre 88
Fundamentals of Stage Makeup
2 units; 1 hour lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course is a study of basic makeup tools, materials, techniques and methods used in creating various character effects for stage and television. Emphasis is placed on the acquisition of practical skills from assignments that cover straight, corrective, and character makeup, including the effects of aging, beards, hair styles, fantasy, and facials distortions.

Theatre 90
Introduction to Stage Lighting and Sound
3 units; 2 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course emphasizes the operation of stage lighting equipment, planning and rigging of lighting units, operation of control systems and related equipment, light sources, stage electricity, color in light, and the design of stage lighting. Students must attend selected theatre events at El Camino College Center for the Arts.

Theatre 94
Costuming for the Stage
3 units; 2 hours lecture, 3 hours lab
Credit, degree applicable
Transfer CSU, UC
This course covers the theory and practice of costuming for the stage, including historical background, basic costume design techniques, cutting, fitting, sewing, pattern making, fabric design and dyeing, proper use and maintenance of equipment, and the duties of wardrobe crews and chiefs. Students must attend selected theatre events at El Camino College Center for the Arts.

Theatre 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Theatre Arts field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Theatre 97abcd
Technical Theatre Production
1 unit; minimum 54 hours lab per semester to be arranged
Credit, degree applicable
Transfer CSU, UC
Supervised practical application through the mounting of major college productions, of techniques learned in departmental courses. Emphasis is on the running crew positions of properties, costumes, makeup, follow spot, deck hand and assistant stage manager. This course provides supervised experience in building, mounting, and running departmental play productions. Emphasis is placed on preparation (setup, construction of scenery, lighting, properties, costumes) and on the running crew positions (properties, costumes, makeup, follow spot, deck hand, and assistant stage manager).

Theatre 98ab
Advanced Technical Theatre Production
1 unit; minimum 54 hours lab per semester to be arranged
Prerequisite: four semesters of Theatre 97abcd with a minimum grade of C
Credit, degree applicable
Transfer CSU, UC
This course is an advanced performance/rehearsal laboratory to support the public presentation of the Theatre Department. Emphasis will be placed on the role of technical theatre production heads including properties, costume, sound, lights, makeup, and deck crew. Stage management of public performances will also be covered.

Theatre 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Theatre with a minimum grade of B in each and acknowledgment by the instructor with whom the student will work
Credit, degree applicable
Transfer CSU, UC - limitations apply
This course provides special advanced studies in a subject field of Theatre not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Theatre projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

Theatre 190ab
Operation of Intelligent Lighting Fixtures
2 units; 1.5 hours lecture, 2.5 hours lab
Recommended Preparation: Theatre 90
Credit, degree applicable
Transfer CSU
This course is one of a four-course series on intelligent lighting fixtures and provides instruction in the function and application of computer-controlled lighting fixtures to various entertainment industries. Emphasis is placed on the identification, selection and utilization of moving mirror projectors, moving yoke wash lights and moving yoke projectors and related aesthetic and lighting-design concepts.

Theatre 191ab
Repair and Maintenance of Intelligent Lighting Systems
2 units; 1 hour lecture, 3 hours lab
Recommended Preparation: Theatre 90, Theatre 190ab
Credit, degree applicable
Transfer CSU
This course is one of a four-course series on intelligent lighting and provides instruction in the repair and maintenance of computer-controlled moving mirror and moving yoke lighting fixtures. Emphasis is placed on practical experience with scanning heads, moving yoke motors, electric and magnetic ballasts, circuit board replacement, optic systems, color mixing systems, pattern and gobo systems, field repair and the related technical concepts.

Transfer Studies – Certificates of Achievement

(Behavioral and Social Sciences Division)

Transfer Studies - Certificate of Achievement
The transfer studies certificate provides students with the opportunity to explore diverse methods of inquiry through course work required for fulfilling California State University General Education Breadth requirements or the Intersegmental Segmental General Education Transfer Curriculum (IGETC). Students will develop critical thinking skills, learn to communicate effectively in writing, and acquire an understanding of major concepts, issues, and diverse viewpoints. Through course options, students will use mathematical concepts to solve problems, employ methods of scientific inquiry to understand the world around them, and investigate the arts, humanities and social and behavioral sciences.

Certificate of Achievement
CSU General Education-Breadth: A certificate of achievement will be granted to students who complete a minimum of 39 units from category A through E of the CSU general education requirements.
Note: To receive full certification of the CSU general education pattern, a grade of C or better is required in areas A and B4. Certification means that El Camino College students have completed the lower division general education requirements for the CSU. Students must request certification at the Records window.
Note: Completion of CSU General Education Breadth requirements alone is not enough to make students eligible for admission to a CSU. Please consult with a counselor for details on completing transfer admission requirements.
Total Units: 39

Intersegmental General Education Transfer Curriculum (IGETC): A certificate of achievement will be granted to students who complete a minimum of 34 units to fulfill the IGETC pattern requirements.
Note: To receive full certification of the IGETC pattern, a grade of C or better is required in each course. Certification means that El Camino College has verified that students have completed the lower division general education requirements for IGETC. Students must request certification at the Records window.
Note: Completion of the IGETC requirements alone is not enough to make students eligible for admission to a CSU or UC. Please consult with a counselor for details for completing transfer admission requirements.
Total Units: 34

Tutor Training

Tutor Training 200
Theory and Practice of Tutoring
1 unit; 1 hour lecture
Credit, degree applicable
Transfer CSU
This course is designed for students who intend to be tutors. It meets the College Reading Learning Association training program requirements and is designed to help student tutors learn to communicate clearly and effectively with students needing academic assistance. Course content includes learning theories, tutorial techniques, program procedures and responsibilities, and tutoring practice.
Note: To be considered for El Camino College employment as a tutor, students need to have completed the course they wish to tutor with a final grade of B or better. The recommendation of the appropriate instructor is also necessary.
Note: Pass/no pass only.

Welding

Welding 1
Introduction to Welding Process
8 units; 5 hours lecture, 10 hours lab
Credit, degree applicable
Transfer CSU
In this course, students are introduced to welding processes with a primary focus on developing manipulative skills. Welding processes covered include oxy-acetylene, plasma arc, shielded metal arc, gas tungsten arc, gas metal arc, and flux cored arc. The course also includes a study of occupational safety, weld symbols, print reading, metal fabrication, and joint design.

The hours per week of courses may be adjusted based on the length of the term.

Welding 2abc
Basic Welding Technology
8 units; 5 hours lecture, 10 hours lab
Prerequisite: Welding 1 or 21 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This is an intermediate welding course with emphasis on the weldability of mild steel, low-alloy steel, stainless steel, cast iron and aluminum utilizing all of the appropriate welding processes. The course will include welding safety, nomenclature, weld symbols and Los Angeles City Structural Certification specifications.

Welding 15ab
Basic Welding for Allied Fields
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU
This is a basic course for students in allied fields that utilize welding processes. Students will be introduced to welding equipment, nomenclature, safety, and the oxy-acetylene, shielded metal arc, and gas metal arc welding processes. Manipulative skills will be developed in cutting and welding in the flat and in the vertical down positions.

Welding 19ab
Layout Pipefitter
3 units; 2 hours lecture, 4 hours lab
Prerequisite: Welding 1 or 21 with a minimum grade of C in prerequisite or equivalent
Credit, degree applicable
Transfer CSU
This is a welding course designed to introduce the student to pipe layout procedures and pipe fabrication. The course covers template development, layout techniques, fabrication skills, nomenclature and field measurement skills.

Welding 21
Basic Shielded Metal Arc Welding (SMAW)
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU
This is a basic course in shielded metal arc welding designed to provide the student with manipulative cutting and welding skills in the flat and horizontal fillet positions. The course also includes a study of welding nomenclature, equipment, occupational safety, joint design, electrode classification, weld symbols, and blueprint reading.

Welding – A.S. Degree and Certificate of Achievement

(Industry and Technology Division)

The welding program prepares student for employment in the field and provides upgrade opportunities for currently employed personnel. By completing the degree or certificate requirements, students gain proficiency in the following welding processes: oxy-acetylene cutting, plasma arc cutting, brazing and welding, shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, and flux cored welding. Students develop skills in welding ferrous and non-ferrous alloys in flat, horizontal, vertical, and overhead positions. Students also acquire proficiency in blueprint reading, layout, structural fabrication, and pipe welding. Competencies will be assessed regularly in accordance with criteria established by the American Welding Society, the American Petroleum Institute, the American Society of Mechanical Engineers, and the American National Standards Institute.

El Camino College Major Requirements
Day Program: 24 units from: Welding 1, 2abc
Evening Program: complete a minimum of 24 units from: Welding 21, 23abc, 40abcd, 45abcd
Recommended Electives: Computer Aided Design/Drafting 5, Machine Tool Technology 16ab, Technical Mathematics 1, English A or qualifying score for English 1A on the English Placement Test
Total Units: 24-27

Certificates of Achievement
A Certificate of Achievement will be granted upon completion of the courses in the day or evening program for the Welding I or Welding II options. At least 50% of the courses required for the Certificate of Achievement must be completed at El Camino College.
Welding I Option:
Day Program: Complete 32 units from: Welding 1, 2abc
Total Units: 32
Evening Program: Complete a minimum of 32 units from: Welding 21, 23abc, 40abcd, 45abcd
Total Units: 32
Welding II Option:
Day Program: Complete 32 units from: Welding 1, 2abc; complete 9-12 units from the following: Computer Aided Design/Drafting 5, Machine Tool Technology 16ab, Technical Mathematics 1, English A or qualifying score for English 1A on English Placement Test
Total Units: 41-44
Evening Program: Complete a minimum of 32 units from: Welding 21, 23abc, 40abcd, 45abcd; complete 9-12 units from the following: Computer Aided Design/Drafting 5, Machine Tool Technology 16ab, Technical Mathematics 1, English A or qualifying score for English 1A on English Placement Test
Total Units: 41-44

Welding 23abc
Arc Welding Certification
3 units; 2 hours lecture, 4 hours lab
Prerequisite: Welding 1 or 21 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This course is designed for the advanced arc welding student preparing for an American Welding Society (AWS) Structural and Light Gauge Certification, Los Angeles City Structural Light Gauge and Reinforcing Steel Welding Certification or California State Welding Certification. The welding and certification of hi-pressure pipe is not covered in this course.

Welding 27abc
Pipe Welding and Pipe Fabrication
4 units; 2 hours lecture, 6 hours lab
Prerequisite: Welding 1 or Welding 21 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This is a welding course designed to introduce the student to pipe welding procedures and pipe fabrication. The course covers types of pipe and piping, identification of pipe, pipe welding procedures and processes, joint fabrication, and pipe layout procedures.

Welding 40abcd
Gas Tungsten Arc Welding (GTAW), Gas Metal Arc Welding (GMAW)
3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU
In this course, students will develop manipulative skills using Gas Tungsten Arc Welding (GTAW) and Gas Metal Arc Welding (GMAW) processes on ferrous and non-ferrous alloys. Emphasis is placed on the requirements for certification in accordance with AWS D.17.1:2001, specifications for Fusion Welding for Aerospace Applications (formerly Mil-Standard-1595A Qualifications of Aircraft, Missile and Aerospace Fusion Welders).

Welding 45ab
Structural Fabrication and Blueprint Reading
5 units; 4 hours lecture, 4 hours lab
Prerequisite: Welding 1 or 21 with a minimum grade of C in prerequisite
Credit, degree applicable
Transfer CSU
This welding course is designed to focus on those skills required to fabricate a project from a blueprint to the finished product. Emphasis is placed on blueprint reading, proper use of tools and equipment, math, and shop safety.

Welding 50
Special Topics in Welding
Units determined by individual course; lecture/lab hours determined by individual course
Credit status determined by individual course
This course is designed to explore topics in Welding more specific than provided in other courses in the regular departmental curriculum. Students are referred to the current schedule of classes for details of specific courses.

Welding 95abcd
Cooperative Work Experience Education
2-4 units; hours to be arranged
Enrollment Limitation: Employment or volunteer work in a position related to the student's major or career goal by the second week of the semester. Completion of or current enrollment in one course from the major.
Credit, degree applicable
Transfer CSU - limitations apply
Through a set of learning objectives established by the student, supervisor, and instructor, each student will work with and learn from experts in the Welding field. These experiences will enable students to improve job skills, analyze career opportunities and requirements, and compare them to personal abilities and career expectations.
Note: The total units earned for CWEE may not exceed 16 units.

Welding 99abc
Independent Study
1-3 units; hours to be arranged
Enrollment Limitation: two courses in Welding with a minimum grade of B in each and acknowledgment by the instructor with whom student will work
Credit, degree applicable
Transfer CSU - limitations apply
This course provides special advanced studies in a subject field of Welding not covered in the regular departmental offerings. Regular conferences with the instructor are coordinated with assigned Welding projects (60 hours per unit).
Note: Refer to page 11 of this Catalog for eligibility requirements.

***Some UC transferable courses have credit limitations. For details, see a counselor, the Transfer Center advisor, or the articulation officer.**

Women's Studies

Women's Studies 1
An Introduction to Women's Studies
3 units; 3 hours lecture
Recommended Preparation: eligibility for English 1A
Credit, degree applicable
Transfer CSU, UC
This interdisciplinary course introduces students to the field of women's studies. The history of feminism, feminist thought, and women's studies as an academic discipline will be examined and assessed. The social construction of sex, gender, and sexuality, the representation of women in American society, and the role of women in American institutions will be analyzed from theoretical perspectives of various academic disciplines. Feminist perspectives will be utilized to critically analyze race, ethnicity, social class, sexuality, and age as they correlate with sex and gender in American society.

Woodworking
See Construction Technology

X-Ray Technology
See Radiologic Technology

Zoology
See Biology

Administration

Dr. Thomas M. Fallo
Superintendent/President

Dr. Francisco M. Arce
Vice President, Academic Affairs

Ms. Jo Ann Higdon
Vice President, Administrative Services

Dr. Jeanie M. Nishime
Vice President, Student and Community Advancement

Ms. Barbara Perez
Vice President, Human Resources

Deans

Mr. Jose Anaya
Community Advancement

Dr. C. Irvin Drew
Interim, Health Sciences and Athletics

Dr. Donald Goldberg
Mathematical Sciences

Mr. Thomas Lew
Humanities

Dr. Gloria E. Miranda
Behavioral and Social Sciences

Dr. Virginia L. Rapp
Business

Dr. Stephanie Rodriguez
Industry and Technology

Dr. James F. Schwartz
Interim, Fine Arts

Dr. Jean Shankweiler
Natural Sciences

Dr. Regina R. Smith
Counseling and Student Services

Dr. Arvid Spor
Enrollment Services

Associate Deans

Dr. Thomas Jackson
Industry and Technology

Dr. Barbara Jaffe
Humanities

Directors/Managers

Dr. Kim Baily
Interim, Nursing

Mr. Robert Barbone
Athletic Director

Mr. Rocky Bonura
Business Services

Ms. Julie Bourlier
Bookstore

Ms. Hortense Cooper
Financial Aid and Scholarship

Ms. Sandra De Mos
Child Development Center

Mr. Robin Dreizler
Outreach and School Relations

Ms. Janice Ely
Business Manager

Mr. Robert Gann
Facilities Planning and Services

Ms. Ann M. Garten
Community Relations

Ms. Irene Graff
Institutional Research

Ms. Alice Grigsby
Learning Resources

Ms. Bozena Morton
Resource Development - Grant Development and Management

Mr. William Mulrooney
Admissions and Records

Ms. Dipte Patel
Special Resource Center

Ms. Dawn Reid
Extended Opportunity Programs and Services

Mr. Bruce L. Spain
Center for the Arts

Mr. Michael J. Trevis
Chief of Police/Public Services Instructional Programs

Mr. Harold L. Tyler
Student Development

Mr. John Wagstaff
Information Technology Services

Vacant
Accounting

Vacant
Staff and Student Diversity

Assistant Directors

Mr. Thomas Brown
Facilities Planning and Services

Mr. Bruce Hoerning
Facilities Planning and Services

Ms. Jeanette Magee
EOP&S/CalWORKs

Mr. Andrew Nasatir
Bookstore

Ms. Esperanza Nieto
Admissions and Records

Ms. Allene Quarles
Human Resources

Mr. Tyler Robbins
Financial Aid and Scholarships

Ms. Betty Sedor
Community Education and Development

Mr. Satish Warrier
Information Technology Services

Specially Funded Programs

Ms. Pauline G. Annarino
Director, Western Region Interpreter Education Center

Ms. Kathy Brinkman
Interim Director, Workforce Education

Ms. Katie Gleason
Assistant Director, Resource Development - Annual and Alumni Giving (El Camino College Foundation)

Mr. David Gonzales
Director, Center for Applied Competitive Technologies

Mr. Maurice Kogon
Director, Center for International Trade Development

Mr. Philip Sutton
Director, Workplace Learning Resource Center

Ms. Starleen Van Buren
Director, Small Business Development Center

Vacant Position
Director, El Camino College Foundation

Faculty

Acknowledging that the quality of a college is largely dependent upon the quality of its faculty, El Camino College endeavors to maintain a consistently superior teaching staff. In height of academic achievement, breadth of practical experience, and depth of personal dedication, the instructors at El Camino College are among the finest in California.

The College's faculty makes policy recommendations on academic and professional matters to the administration and to the Board of Trustees. Its governing arm is the Academic Senate composed of representatives from each division.

The Academic Senate has developed the academic rank. It is not an official appointment by the Board of Trustees but, instead, is a traditional practice which recognizes professional preparation and experience.

Qualifications for academic rank are based on these requirements:

Lecturer: All adjunct and temporary faculty members have this rank. Adjunct faculty who have previously taught 10 consecutive semesters are listed in this catalog.

Instructor: This rank is for probationary (contract) faculty members who do not qualify for higher rank.

Assistant Professor: Faculty members who have achieved regular faculty status or tenure.

Associate Professor: Tenured faculty members who are at least at Step 7 on the salary schedule.

Professor: Tenured faculty members who are at least at Step 10 (Class V) on the salary schedule or Step 13 (Class I-IV) on the salary schedule.

Professor Emeritus: The Academic Senate, in consultation with the Vice President - Academic Affairs, will grant Professor Emeritus status after retirement to tenured faculty members in good standing.

Academic Senate Officers

David Vakil, *President*
Saul Panski, *Vice President, Compton Community Educational Center*
Christine Jeffries, *Vice President, Educational Policies*
Matthew Klein, *Vice President, Faculty Development*
Lance Widman, *Vice President, Finance and Special Projects*
Chris Wells, *Vice President, Legislative Action*
Claudia Striepe, *Secretary*
Lars Kjeseth, *Curriculum Chair*

A

Abiligou, Peter (1992)
Lecturer, Dance
M.F.A. University of California, Los Angeles

Ahmadpour, Alireza (2004)
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Alamillo, Lucy (2000)
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Allen, Stacey (1999)
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Amling, Joy A. (1985)
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Annick, Jennifer A. (2001)
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Ansite, Martha (1998)
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Antoine, Ellen R. (1988)
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Antrim, Craig K. (1974)
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Arce, Francisco M. (2006)
Vice-President - Academic Affairs
B.A. California State University, Los Angeles
M.A. University of California, Santa Barbara
Ed.D. University of San Francisco

Arensmeyer, Jr., John W. (2000)
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Armao, Eugene (1989)
Professor, English
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Arnold, Mark S. (1991)
Lecturer, Administration of Justice
B.S. California State University, Los Angeles
J.D. Southwestern University School of Law, Los Angeles

Awainisyan, Aida (2003)
Lecturer, Mathematics
B.Sc., M.S., Ph.D. University of Baghdad

B

Bachmann, Susan (1988)
Professor, English
B.A. Ph.D. State University of New York
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Back, Leslie W. (1978)
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Bahti, Cynthia (1986)
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Baily, Kim (2006)
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M.S.N. University of Phoenix
Ph.D. St. George's Hospital Medical School

Baker, Florence M. (1996)
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Barber, George A. (1983)
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Barley, Danny L. (1985)
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M.A. Azusa Pacific College

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Baxter, Susan (2001)
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Bayssa, Beyene (2000)
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Beaudoin, Robert E. (1983)
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Beckett-Lemus, Lynn (2001)
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M.S. Claremont Graduate University

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C

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Industry Experience

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Corbin, Susan M. (2001)
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