NON-DISCRIMINATION STATEMENT: The district shall not discriminate based on ethnic group identification; race, color, age, citizenship, ancestry; religion; marital status; national origin; sex; sexual orientation; mental or physical disability; medical condition; veteran status; parental status; or because a student is perceived to have one or more of these characteristics.
DIABLO VALLEY COLLEGE

Pleasant Hill Campus
San Ramon Campus

2017-2018 CATALOG
Fall 2017 • Spring 2018 • Summer 2018

Sixty-eighth academic year

accredited by
Accrediting Commission for Community and Junior Colleges
American Culinary Federation Education Foundation Accrediting Commission
California Association for Alcohol/Drug Educators
California Consortium of Addiction Programs and Professionals
Commission on Dental Accreditation of the American Dental Association

approved by
The California State Department of Education
The Department of Homeland Security
ACCREDITATION

Institutional
Diablo Valley College is accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges (ACCJC/WASC), which is an institutional accrediting body recognized by the Council for Higher Education Accreditation and the U.S. Department of Education. The contact information of the AACJC is provided below:

Accrediting Commission for Community and Junior Colleges
10 Commercial Boulevard, Suite 204
Novato, California 94949
415-506-0234
www.accjc.org

Programmatic
The following Diablo Valley College programs are accredited by programmatic accrediting bodies, which are responsible to determine license/certification eligibility.

Dental Assisting and Dental Hygiene
Commission on Dental Accreditation of the American Dental Association
211 East Chicago Avenue
Chicago, Illinois 60611-2678
www.ada.org

Culinary Arts, Baking and Pastry, Restaurant Management
The Accrediting Commission of the American Culinary Federation Education Foundation
180 Center Place Way
St. Augustine, Florida 32095
www.acfchefs.org

California Association for Alcohol/Drug Educators
5230 Clark Road, Suite 3
Lakewood, California 90712
707-722-2331
www.caade.org

California Consortium of Addiction Programs and Professionals
PO Box 214127
Sacramento, California 95821
916-338-9460
www.ccapp.us
Notice: The information contained in this catalog describes the anticipated programs, courses, rules, regulations, and fees of Diablo Valley College. These are subject to change at any time. The college disclaims liability for any unintended errors in this publication.
# Table of contents

## Chapter One - General information .................................................................6
- General information ....................................................................................7
- Course and program offerings ....................................................................8
- Admissions requirements ..........................................................................9
- Student fees and other financial obligations ..............................................10
- Student financial aid ..............................................................................12
- Learning resources and services ...............................................................13

## Chapter Two - College policies ...................................................................14
- Nondiscrimination ....................................................................................15
- Academic requirements and policies .......................................................16
- Student rights and responsibilities ...........................................................32
- Grievance and complaint procedures .......................................................43
- General college policies .........................................................................43

## Chapter Three - Transfer, degrees, and certificates ....................................44
- Transfer information ...............................................................................45
  - Transfer to CSU ....................................................................................45
  - Intersegmental General Education Transfer Curriculum (IGETC) ........46
  - Transfer to UC ......................................................................................46
  - Transfer to independent (private and out-of-state) colleges and universities ....47
  - DVC associate degrees .......................................................................47
  - Associate degree requirements for students entering fall 2016 ............48
  - Option 1 - DVC general education .......................................................50
  - Option 2 - IGETC - Intersegmental General Education ......................52
  - Option 3 - CSU GE - California State University General Education ....54
  - DVC career/technical programs ............................................................56
  - DVC certificate programs and associate degrees ..................................57

## Chapter Four - Program and course descriptions ........................................58
- Understanding the course descriptions .....................................................60
- Coursework and study time per unit ..........................................................61
- Program length ........................................................................................61
- Program and course descriptions ...............................................................62

## Chapter Five - Faculty and administrators ..................................................374
- Faculty and administrators .....................................................................375
- Index ........................................................................................................383
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>General information</td>
<td>7</td>
</tr>
<tr>
<td>Course and program offerings</td>
<td>8</td>
</tr>
<tr>
<td>Admissions requirements</td>
<td>9</td>
</tr>
<tr>
<td>Student fees and other financial obligations</td>
<td>10</td>
</tr>
<tr>
<td>Student financial aid</td>
<td>12</td>
</tr>
<tr>
<td>Learning resources and services</td>
<td>13</td>
</tr>
</tbody>
</table>
GENERAL INFORMATION

Diablo Valley College (DVC) is one of three publicly supported two-year community colleges in the Contra Costa Community College District. The larger of DVC’s two campuses is located near Interstate 680 in Pleasant Hill; the San Ramon Campus serves the south county in Dougherty Valley. Between its two campuses, DVC serves more than 22,000 students each semester with a wide variety of program options.

Academic freedom statement
The Contra Costa Community College District affirms its belief in the academic freedom of faculty, management and students to teach, study, conduct research, write and challenge viewpoints without undue restriction.

Members of the college faculty are citizens, members of a learned profession and representatives of an educational institution. When they speak or write as citizens, they should be free from institutional censorship or discipline, but their special position in the community imposes special obligations. As persons of learning with institutional affiliations, they should remember that the public may judge their profession and institution by their statements. Hence, they should at all times be accurate, exercise appropriate restraint, show respect for the opinion of others, and make every effort to indicate that they are not expressing their institution’s views.

Mission
Diablo Valley College is passionately committed to student learning through the intellectual, scientific, artistic, psychological, and ethical development of its diverse student body. DVC prepares students for transfer to four-year universities; provides career and technical education; supports the economic development of the region; offers pre-collegiate programs; and promotes personal growth and lifelong learning.

DVC Institutional learning outcomes
Diablo Valley College students will gain knowledge, skills, and an appreciation of ethical issues in the following areas:

- **Language and Rationality** - Students will develop the principles and applications of language toward logical thought, clear and precise expression, and critical evaluation of communication in whatever symbol system the student uses.\(^*\)

- **Natural Sciences** - Students will examine the physical universe, its life forms, and its natural phenomena, develop an appreciation and understanding of the scientific method, and the relationships between science and other human activities.\(^*\)

- **Arts and Humanities** - Students will examine the cultural activities and artistic expressions of human beings, develop an awareness of the ways in which people throughout the ages and in different cultures have responded to themselves and the world around them in artistic and cultural creation, and develop an aesthetic understanding and an ability to make value judgments.\(^*\)
Social and Behavioral Sciences - Students will examine social and behavioral sciences that focus on people as members of society, develop critical thinking skills related to the ways people act and have acted in response to their societies, develop an awareness of social and behavioral science methods of inquiry, and develop an appreciation of how societies and social subgroups operate and stimulate.*

Workplace Skills - Students will develop skills that will allow them to be viable participants in a competitive workplace, e.g. competence in relevant 21st century literacies and effective communication of new knowledge in an ethical and legal manner.

*Title 5 (55063 Minimum Requirements for the Associate Degree)

About this catalog and program requirements
The DVC catalog specifies the requirements to earn a degree or certificate. The requirements in a specific academic year’s catalog are the student’s contract (catalog rights) with the college and that catalog defines which courses the student must complete to earn a degree or certificate.

The information in this catalog describes the anticipated programs, courses, rules, regulations, and fees of Diablo Valley College. These are subject to change at any time. The college disclaims liability for any unintended errors in this publication.

Please see page 48 for more information on catalog rights and continuous enrollment for degrees and certificates.

Schedule of classes
The schedule of classes is presented in multiple formats. A pdf document containing DVC’s class offerings is published online each semester prior to registration, and may be available to purchase in limited quantities at the Book Center. There is also an online searchable class schedule, which is updated daily and includes the most recent information.

COURSE AND PROGRAM OFFERINGS

Degree and certificate programs
DVC offers more than 50 associate degrees and more than 40 certificates of achievement, and a broad selection of certificates of accomplishment. Most associate degree programs can be completed in four terms of full-time study (15 units per term). Certificate programs are generally shorter in length. Length of time to completion will vary based on student course-taking patterns. To see the complete list of programs, visit: www.dvc.edu/programs.

Day, evening, and summer classes
Classes are taught in the day and evening in full-term and short-term formats. A selection of day and evening classes are also taught during the summer. See the schedule of classes for more information. www.dvc.edu/schedule.

Online and hybrid courses
An online course in the Contra Costa Community College District is a class offered entirely online that has no required face-to-face meetings. In the schedule of classes these courses are coded as online. A hybrid course in the Contra Costa Community College District is a class that offers instruction both online and on campus. Required in-person class meetings are included in the schedule of classes following a predictable pattern (on the same day(s) of the week and at the same time). In the schedule of classes these courses are coded as partially online. To find out more about online classes visit www.dvc.edu/online.

Contract education courses
A contract education course is one that a community college offers under contract pursuant to Education Code section 78021 with a public or private agency, corporation, association, or other organization (title 5, section, 55000). Such courses are not open to general enrollment.

Noncredit courses
A noncredit course is one that is approved by the college and district as meeting the needs of enrolled students but that does not award college credit and is not transcripted. Such courses are limited to the following categories: Parent Education, Basic Skills, English as a Second Language, Immigrant Education, Education Programs for Persons with Substantial Disabilities, Short Term Vocational Programs with High Employment Potential, Education Programs for Older Adults, Family and Consumer Sciences, Health and Safety.

Academic Calendar 2017-18
Please check our website www.dvc.edu/calendar and click on Academic/Calendar 17-18 for the most current dates and a more complete calendar.
ADMISSION REQUIREMENTS

There are a number of steps necessary for successful enrollment in classes at DVC. Students are encouraged to complete the matriculation process, which includes admission, assessment, orientation, and advising prior to registering for classes. Please see page 33 for more information about the matriculation policy. For detailed information on how to enroll, please see our website, www.dvc.edu/apply.

Admission eligibility

A student is eligible for admission if he or she:

- has graduated from an accredited high school, or
- is 18 years of age or older and is no longer in high school, or
- has passed the State of California Certificate of Proficiency Test (CHSPE) or the General Educational Development Test (GED).

California residence status

California residence status is determined by the Admissions and Records Office. A student is generally eligible for residency if he or she has lived in California for at least one year prior to the beginning of the term in which he or she wishes to enroll, and can show evidence of California residency.

Non-residence status

Non-resident students must pay a non-resident tuition fee in addition to the other usual college fees. Please see page 10 for more information about student fees.
International students

International students interested in applying to DVC can download and print out the application from www.dvc.edu/international. International students are required to comply with immigration regulations and must submit supporting documents for admission purposes.

A checklist to ensure that students understand what they need to submit to be admitted as an international student to DVC is available at www.dvc.edu/isas-checklist. International students must pay the international student rate for courses in addition to the usual college fees. International students must also pay the mandatory insurance cost.

For admissions deadlines and more information please visit: www.dvc.edu/international or contact the International Student Admissions and Services (ISAS) Office.

Transferring to DVC

DVC welcomes transfer students from other colleges. Transfer students should follow the general application procedures listed in the Student Resource Guide. Please see page 18 for more information about transfer credit.

Transcripts

Release of student records

Students may have their DVC records released to them only if they have no outstanding debts (including fees owed for current term) and can show positive picture identification, in the form of a current student ID card, a California Driver’s License, or a California ID card.

If a student wants his or her DVC records released to someone else, that person must show the Admissions and Records Office positive picture identification and an original permission note or release form that has been signed by the student. Please see page 11 for more information about transcript fees.

STUDENT FEES AND OTHER FINANCIAL OBLIGATIONS

<table>
<thead>
<tr>
<th>Fee Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment fee (CA residents)</td>
<td>$46 per unit</td>
</tr>
<tr>
<td>Enrollment fee (U.S. citizens or permanent residents who are not California residents, or students who are not U.S. citizens)</td>
<td>$300 per unit</td>
</tr>
<tr>
<td>Student union fee</td>
<td>$1 per unit (maximum $10 per student per academic year)</td>
</tr>
<tr>
<td>Student activity fee (fall and spring)</td>
<td>$5 per term (fee is voluntary)*</td>
</tr>
<tr>
<td>Student representation fee (fall and spring)</td>
<td>$2 per term (fee is voluntary)**</td>
</tr>
<tr>
<td>Parking fees</td>
<td>$3 a day or $48 for the fall or spring terms or $25 mid-semester (after the ninth week); $25 for summer; $25 per term for students who qualify for the Board of Governors Fee Waiver</td>
</tr>
<tr>
<td>Books, supplies, and course material fees</td>
<td>$250-$350 estimate per term for full-time students. Book and supply costs and requirements vary.</td>
</tr>
<tr>
<td>Course material fees</td>
<td>Some courses require additional materials fees. See schedule of classes for details.</td>
</tr>
<tr>
<td>Field trip fees</td>
<td>Students are expected to pay entrance fees for theaters, galleries, and other activities as well as provide their own transportation. (Alternate assignments given for students who cannot afford the cost.)</td>
</tr>
<tr>
<td>ASDVC Discount Sticker (fall and spring)</td>
<td>$10 per term (optional) Purchase at Student Union Building, Book Center, or the Admissions and Records Office.</td>
</tr>
</tbody>
</table>
### Transcript fees

<table>
<thead>
<tr>
<th>Standard:</th>
<th>FREE for first two (within district)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$5 each thereafter</td>
</tr>
<tr>
<td>Rush:</td>
<td>$15 each (processed within 24 hours)</td>
</tr>
<tr>
<td>Express:</td>
<td>$30 each (processed within one hour)</td>
</tr>
</tbody>
</table>

### Verification of enrollment fees

<table>
<thead>
<tr>
<th>Verification of enrollment fees</th>
<th>FREE for first two verifications (within district)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$2 fee for each request thereafter</td>
</tr>
<tr>
<td></td>
<td>$5 per verification for 24 hour express service</td>
</tr>
</tbody>
</table>

*Allows student government to provide funding for student-related activities and services.

**Allows student government to provide support for governmental affairs representatives of local or state-wide student body organizations.

Refund forms are available online, at the Cashier's Office, Student Life Office and Welcome/Information Center. Waived/refund request forms must be submitted in person or by U.S. mail to the DVC Cashier's Office ONLY. Requests for refund forms must be received within the first two weeks of instruction for a full term class, or before 10 percent of the class time for a short-term class. Refund checks will be issued monthly after the first two weeks of instruction each term.

### Refund of Fees

**Enrollment fee and non-resident tuition refunds**

To receive a fee refund, students must withdraw from school or drop class(es) by the deadline. To qualify for an enrollment fee refund, students must officially drop units:

- within the first two weeks of a term for full-term classes (fall and spring),
- within the first 10 percent of the length of the class for short-term and summer classes.

Refunds are issued automatically within this time period.

The refund policy complies with and is based upon Title 5 regulation and the California Education Code.

**Residency reclassification and adjustment of fees**

Students who believe they are coded as nonresidents in error have the opportunity to request residency reclassification, and if approved, reduce the charges on their account. Documentation is required. Residency reclassification can only be made during the current academic year. Retroactive reclassification for a prior academic year is not permitted.

**Parking permit refunds**

In order to obtain a refund, students must:

- officially drop all units within the first two weeks of the term (fall and spring),
- return the parking permit to the Cashier's Office at the Pleasant Hill Campus.

**Course material fee refunds**

In order to obtain a refund, students must officially drop the class within the first two weeks of the term length class. Refunds can be requested at the Cashier's Office at the Pleasant Hill Campus or at the Admissions and Records Office in San Ramon.

### Student debts to the college

Students are expected to pay their registration fees and all other financial debts at the time of registration. Students who owe fees for overdue library books, returned checks, or other debts will not be allowed to use college services (such as registering for classes or obtaining official transcripts) until their debts are paid. All debts must be paid no later than the end of the term in which the fees were incurred.

Please note: All fees are subject to change by the state legislature. Check www.dvc.edu/fee for updated fee information.

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* Atlas logo

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**Archived**
STUDENT FINANCIAL AID

Diablo Valley College has a broad range of financial aid programs. Pleasant Hill students should go to the Financial Aid or Scholarship offices at the Pleasant Hill Campus, and San Ramon students can go to the West Lobby of the Administration Building. Students may also visit www.dvc.edu/financialaid.

The following programs are administered through the Financial Aid Office, and require students to complete a Free Application for Federal Student Aid (FAFSA) online at www.fafsa.gov or a California Dream Act Application (AB-540 students only) at www.dream.csac.ca.gov. Additional requirements apply to specific programs listed below. Students must adhere to satisfactory academic progress policies and may be subject to financial aid funds policies when receiving financial aid. Please visit the Financial Aid Office website for more information.

Grants

There are six grants and a fee waiver available to students. Qualifications, availability, and limits vary. Please visit the Financial Aid Office website for more information.

- Board of Governors Fee Waiver
- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- Cal Grant B (entitlement and competitive)
- Cal Grant C
- Full-time Student Success Grant
- California Chafee Grant

Work-Study

Federal Work-Study (FWS) - students can work up to 20 hours per week to help meet their educational costs. Work-study jobs are available at a variety of on-campus and off-campus locations. The funds are limited.

Loans

Federal loans are available and both students and parents can apply.

Other aid and benefits

All available financial aid and benefit opportunities are too numerous to list, and may be available through specific academic programs. Students should check with their instructors, division dean, the Financial Aid Office or Scholarship Office for other options that may apply.

Veterans benefits

Various federal and state agencies determine eligibility for veterans benefits, depending on whether the student is a veteran or a dependent of a veteran. Interested students should speak with a staff member in the Veterans Office or contact the Department of Veterans Affairs at 925-313-1481 or 800-827-1000 or visit the website at www.va.gov, and DVC’s website at www.dvc.edu/veterans.

Department of Rehabilitation Assistance

Students with disabilities that interfere with their ability to find and keep a job may receive assistance through the State Department of Rehabilitation (DOR). For more information contact the WorkAbility III Office.

Scholarships

The DVC scholarship program

High school students entering Diablo Valley College, continuing DVC students, and students transferring to four-year colleges and universities will find many opportunities to compete for scholarships established by local, state, and national organizations as well as individual sponsors. Call or visit the Scholarship Program Office for more information. www.dvc.edu/scholarships.
LEARNING RESOURCES AND SERVICES

DVC offers a wide variety of resources and services to support and enhance student success. All of these services are described in greater detail on the DVC website. The web address and contact information are listed with each service below.

<table>
<thead>
<tr>
<th>Learning resources and services</th>
<th>Telephone</th>
<th>Website address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admissions and Records Office</td>
<td>925-685-1310</td>
<td><a href="http://www.dvc.edu/admissions">www.dvc.edu/admissions</a></td>
</tr>
<tr>
<td>Assessment Center</td>
<td>925-969-2132</td>
<td><a href="http://www.dvc.edu/assessment">www.dvc.edu/assessment</a></td>
</tr>
<tr>
<td>CalWORKs Program</td>
<td>925-969-2119</td>
<td><a href="http://www.dvc.edu/calworks">www.dvc.edu/calworks</a></td>
</tr>
<tr>
<td>Career and Employment Services</td>
<td>925-969-2135</td>
<td><a href="http://www.dvc.edu/career">www.dvc.edu/career</a></td>
</tr>
<tr>
<td>Computer Center</td>
<td>925-969-2323</td>
<td><a href="http://www.dvc.edu/computerlabs">www.dvc.edu/computerlabs</a></td>
</tr>
<tr>
<td>Cooperative Agencies Resources for Education (CARE)</td>
<td>925-969-2117, 925-969-2123</td>
<td><a href="http://www.dvc.edu/eops">www.dvc.edu/eops</a></td>
</tr>
<tr>
<td>Counseling Center</td>
<td>925-969-2140</td>
<td><a href="http://www.dvc.edu/counseling">www.dvc.edu/counseling</a></td>
</tr>
<tr>
<td>Disability Support Services</td>
<td>925-969-2182</td>
<td><a href="http://www.dvc.edu/dss">www.dvc.edu/dss</a></td>
</tr>
<tr>
<td>Educational Talent Search</td>
<td>925-969-2189</td>
<td><a href="http://www.dvc.edu/ets">www.dvc.edu/ets</a></td>
</tr>
<tr>
<td>Enrollment Lab</td>
<td></td>
<td><a href="http://www.dvc.edu/enrollmentlab">www.dvc.edu/enrollmentlab</a></td>
</tr>
<tr>
<td>Extended Opportunity Programs and Services (EOPS)</td>
<td>925-969-2117, 925-969-2123</td>
<td><a href="http://www.dvc.edu/eops">www.dvc.edu/eops</a></td>
</tr>
<tr>
<td>Financial Aid</td>
<td>925-969-2009</td>
<td><a href="http://www.dvc.edu/financialaid">www.dvc.edu/financialaid</a></td>
</tr>
<tr>
<td>International Student Admissions Services (ISAS)</td>
<td>925-969-2196</td>
<td><a href="http://www.dvc.edu/international">www.dvc.edu/international</a></td>
</tr>
<tr>
<td>Library Services</td>
<td>925-969-2588</td>
<td><a href="http://www.dvc.edu/library">www.dvc.edu/library</a></td>
</tr>
<tr>
<td>Media and Audiovisual</td>
<td>925-969-2553</td>
<td><a href="http://www.dvc.edu/media">www.dvc.edu/media</a></td>
</tr>
<tr>
<td>Transfer Services</td>
<td>925-969-2135</td>
<td><a href="http://www.dvc.edu/transfer">www.dvc.edu/transfer</a></td>
</tr>
<tr>
<td>Tutoring Services</td>
<td></td>
<td><a href="http://www.dvc.edu/tutoring">www.dvc.edu/tutoring</a></td>
</tr>
<tr>
<td>Scholarship Office</td>
<td>925-969-2094</td>
<td><a href="http://www.dvc.edu/scholarships">www.dvc.edu/scholarships</a></td>
</tr>
<tr>
<td>Student Life Office</td>
<td>925-969-4267</td>
<td><a href="http://www.dvc.edu/student-life">www.dvc.edu/student-life</a></td>
</tr>
<tr>
<td>Student Transition and Academic Retention Team (START) - Foster Youth</td>
<td>925-969-2203</td>
<td><a href="http://www.dvc.edu/fosteryouth">www.dvc.edu/fosteryouth</a></td>
</tr>
<tr>
<td>Student Veteran Resource Center</td>
<td>925-969-2237</td>
<td><a href="http://www.dvc.edu/veterans">www.dvc.edu/veterans</a></td>
</tr>
<tr>
<td>Study Abroad</td>
<td>925-969-2507 or 925-969-2508</td>
<td><a href="http://www.dvc.edu/studyabroad">www.dvc.edu/studyabroad</a></td>
</tr>
<tr>
<td>Upward Bound</td>
<td>925-969-2189</td>
<td><a href="http://www.dvc.edu/ets">www.dvc.edu/ets</a></td>
</tr>
<tr>
<td>Veteran Services</td>
<td>925-969-2121</td>
<td><a href="http://www.dvc.edu/veterans">www.dvc.edu/veterans</a></td>
</tr>
<tr>
<td>Welcome Services</td>
<td>925-969-2106</td>
<td><a href="http://www.dvc.edu/welcomeservices">www.dvc.edu/welcomeservices</a></td>
</tr>
<tr>
<td>WorkAbility III Program</td>
<td>925-969-2207</td>
<td><a href="http://www.dvc.edu/workabilityIII">www.dvc.edu/workabilityIII</a></td>
</tr>
<tr>
<td>Work Experience Education Education</td>
<td>925-969-2042</td>
<td><a href="http://www.dvc.edu/wrkx">www.dvc.edu/wrkx</a></td>
</tr>
</tbody>
</table>
NONDISCRIMINATION

Equal opportunity policy and grievance procedures

DVC does not discriminate on the basis of race, color, national origin, sex, sexual orientation, disability, or age in any of its policies, procedures, or practices, in compliance with Title VI of the Civil Rights Act of 1964 (pertaining to race, color, and national origin), Title IX of the Educational Amendments of 1972 (pertaining to sex), Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975 (pertaining to age), and CCCCD Board Policy 2001. This nondiscrimination policy covers admission and access to, as well as treatment and employment in the college’s programs and activities, including vocational education. Inquiries regarding the equal opportunity policies, the filing of grievances, or requests for a copy of the college’s grievance procedures may be directed to the following: disability support services coordinator for disability related issues; Title IX, Sexual Harassment Title VI, discrimination based on race, color, or national origin, the vice president of student services, Administration Building.

This procedure affords students an opportunity to resolve a variety of complaints, including those alleging discrimination based on race, sexual orientation, color, national origin, sex, handicap, and age. Students who require assistance in the use of this procedure or any of the above-mentioned policies should contact the vice president of student services. For more information about the sexual harassment policy, please see: www.dvc.edu/harassment and for more information about equal opportunity policies and procedures, please see: www.dvc.edu/eeoc.

Inquiries regarding federal laws and regulations concerning nondiscrimination in education or the district’s compliance with those provisions may also be directed to the vice chancellor, human resources and organizational development, Contra Costa Community College District, 500 Court Street, Martinez, CA 94553, or U.S. Department of Education, Office of Civil Rights, 221 Main Street, Suite 1020, San Francisco, CA, 94105.

For more information or to initiate a grievance contact:
Vice president of student services (504, Title IX, Sexual Harassment; Title VI Coordinator and EEOC Officer) 925-969-2005
Vice president of finance and administration (ADA Coordinator) 925-969-2018
Open course policy
It is the policy of the Contra Costa Community College District that unless specifically exempted by statute or regulation, every course, course section, or class reported for state funding, wherever offered and maintained by the District, shall be fully open to enrollment and participation by any person who has been admitted to the college and who meets the prerequisites as may be established pursuant to regulations contained in Title 5 Section 55200.

ACADEMIC REQUIREMENTS AND POLICIES

Academic course requirements and credit

Full-time status
A student must carry a minimum of 12 units in the fall or spring term or four units in a summer session to be considered a full-time student. Fifteen units is the usual load for students who wish to complete the associate degree in two years.

Term unit limit
In fall or spring term, a full-time course load is considered to be at least 12 units. Students who wish to enroll in more than 19 units in the fall or spring term or 12 units in the summer term must have permission prior to the start of the class. Request to exceed unit limits may be made online. For fall or spring term, go to www.dvc.edu/unitlimit. For summer, go to www.dvc.edu/unitlimit-SU.

Veterans must carry a course load of at least 12 certifiable units in order to receive full veteran’s benefits.

International students must carry at least 12 certifiable units each term to maintain their F-1 status. Authorization to be below 12 units must be granted by a designated school official in the International Students Admissions and Services Office.

Remedial unit limit
By state law, students are only allowed to enroll in a maximum of 30 units of remedial coursework. Remedial courses are non degree applicable credit, basic skills courses and are numbered less than 100. The 30 unit limit includes all remedial courses taken at the three community colleges within our district.

Exemptions
Students enrolled in ESL courses or officially identified as having a learning disability are exempt from the 30 unit limit.

Variable unit courses
Some courses give students varying amounts of credit; for example, from one to three units. The number of units varies, depending on the following factors: the contract between instructor and student; how many segments of the course the student completes (for example, the course may be divided into three four-week segments); the subject matter and/or number of meetings; and the number of classes the student attends.

Repeating courses
As a general rule, students may not enroll more than once in a credit course if the student received a satisfactory grade on the previous enrollment. An enrollment occurs when a student receives an evaluative or non-evaluative symbol in a credit course. Evaluative symbols include A, B, C, D, F, P, and NP. Non-evaluative symbols include I, IP, RD, and W. A satisfactory grade is an A, B, C, or P. Substandard work is course work for which the grading symbols D, E, NP, or NC have been recorded. A student receiving an A, B, C, or P typically cannot enroll in that course again, unless an exception to the general rule applies that allows the student an additional enrollment or enrollments in that course.

The following exceptions to the general rule permit a student receiving a satisfactory grade to enroll in the same credit course again:

- courses properly designated by a district as repeatable
- a subsequent enrollment due to significant lapse of time (three years)
  - legally mandated courses
  - courses necessary as a result of significant change in industry or licensure standards
  - courses needed due to recency requirements for a program
- variable-unit courses offered on an open-entry/open-exit basis
- extenuating circumstances
- occupational work experience courses
- students with disabilities repeating a special class

For an additional enrollment in the same course to be allowed, either the student must meet the circumstances specified for the exception or, in the case of repeatable courses, the course is properly designated as repeatable. Students must petition to be granted an exception that allows a subsequent enrollment. The petition is found online at: www.dvc.edu/petition-to-repeat. If permission to repeat is granted, both grades will appear on the transcript and will be used in the grade point average calculation. Only the first course completed will be applied towards a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
Repeating courses with substandard grade
Students will be limited to enrolling in non-repeatable, credit courses a maximum of three times. This includes students earning substandard grades (“D”, “F”, or “NP”) or dropping with a “W”. Students who have received a substandard grade in a course should see the “improving a grade point average” on page 31 for more information. Students must petition for a third enrollment. The petition is found online at: www.dvc.edu/petition-to-repeat.

Repeatable courses:
There are three types that may be designated as repeatable by all students:
1. courses for which repetition is necessary to meet the major requirement of California State University (CSU) or University of California (UC) for completion of a bachelor’s degree,
2. intercollegiate athletics, and
3. intercollegiate academic or vocational competition.

See course descriptions to determine which courses may be repeated.

Limitations on enrollment
Enrollment limits have been placed on certain types of courses offered within the Contra Costa Community College District. Students are limited to a total of four enrollments in courses that are considered “active participatory courses that are related in content.” At DVC, these limitations apply to certain courses with the subject codes:
• ART
• DANCE
• DRAMA
• KNACT
• KNDAN
• MUSIC

Within these subjects, courses that are “active participatory courses that are related in content” have been assigned to “families” and students are limited to four aggregate enrollments within the “family”. The “families” are district-wide and the limitation to four enrollments applies to courses taken at any college within the district. Refer to the discipline descriptions in this catalog for further information on “families” and enrollment limitations.

Independent study courses
These courses are only available to students who have exhausted the learning opportunities of our regular course offerings. They require the student to undertake a significant project or research with clearly established, measurable learning objectives.

To apply for an independent study course, students should get a tentative agreement on their research project from a supervising instructor. They must then complete an independent study form (available in the Instruction Office or division offices) and receive approval of the supervising instructor and division dean.

Deadlines
Independent study forms must be submitted for approval to the division dean before the sixth week of the term.

Auditing of classes
Diablo Valley College does not permit auditing of classes. All students must submit an application for admission to the college and officially register.

Course prerequisites and/or co-requisites
Students enrolling in a course with a prerequisite must complete that prerequisite with a “C” grade or higher before they are allowed to register. A course has a prerequisite to ensure that a student has the appropriate body of knowledge to be successful. Courses with a co-requisite require that a student has successfully completed the course in a prior term or is enrolled in the co-requisite course in the same term.

Please note: Dropping a class with a co-requisite will result in a drop from both classes.

Usually a prerequisite is a course from a lower sequence of courses. For example: Students may not enroll in Math 142 (Elementary Statistics with Probability) without first passing Math 120 (Intermediate Algebra) or equivalent with a “C” grade or higher. Usually, a co-requisite course is a lab or a course that provides supplemental instruction.

To see which courses have prerequisites and/or co-requisites see the individual course offerings in the catalog.

Prerequisite and/or co-requisite challenge
Students who are denied enrollment in a class because they do not meet the prerequisite requirement may challenge the prerequisite. Challenge petitions are available in the Admissions and Records Office.

Challenging a prerequisite or co-requisite
Prerequisites and co-requisites may be challenged for the following conditions:
• The prerequisite is based on health or safety and is either not valid or does not apply to a particular student.
• The prerequisite is discriminatory on the basis of ethnicity, religious belief, political persuasion, age, gender, or sexual orientation.
• The prerequisite course has not been reasonably made available at DVC.
Academic requirements and policies

- The prerequisite was not established according to state law.
- The student has the knowledge or ability to succeed in the course or program despite not meeting the prerequisite or co-requisite. The student has gained the knowledge and skills in another fashion, for example, through work or life experience.

Contact the Admissions and Records Office regarding information and forms for challenging prerequisites.

Acceptance of transfer credits and alternative credit

Transfer of credit and coursework
In order to evaluate equivalent coursework, DVC accepts transcripts from institutions currently recognized by the following regional accrediting organizations: Middle States Association of Colleges and Schools, Commission on Higher Education; New England Association of Schools and Colleges, Commission on Institutions of Higher Education; North Central Association of Colleges and Schools, the Higher Learning Commission; Northwest Commission on Colleges and Universities; Southern Association of Colleges and Schools, Commission on Colleges; Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges; Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges; Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges; Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges; Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges; Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges; Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges; Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges.

DVC also follows the recommendations of the American Association of Collegiate Registrars and Admissions and Records Officers. The official transcript from the other college is required. Students must submit sealed unopened transcripts in person or by mail to the Admissions and Records Office of Diablo Valley College. Students must make a counseling appointment to determine applicability of courses taken elsewhere towards their program at DVC.

Students are advised that:

1. Only courses and credit from accredited institutions will be considered for transfer to DVC.
2. Upper division courses may be applied to degree, certificate and transfer requirements under the following conditions:
   a. Upper division coursework may be applied to satisfy DVC general education, major, and certificate requirements. A course substitution request form (available online) must be submitted to the Admissions and Records Office.
   b. Upper division coursework may be applied to Intersegmental General Education Transfer Curriculum (IGETC) requirements under the following conditions:
      I. When a University of California (UC) or California State University (CSU) campus has classified a course or series as upper-division but has requested that lower division transfer credit be allowed because an equivalent course is taught at a community college or because the preparation of the subject is desired prior to transfer. Current examples include economics, organic chemistry and abnormal psychology.
      II. When a non-California Community College (CCC) course is determined comparable to one taught and approved for IGETC at a CCC, it may be applied to IGETC regardless of its upper-division status.
      III. When a CSU uses an upper-division course in its “lower division” General Educational pattern.
   c. Upper division coursework may be applied to California State University General Education (CSU GE) requirements under the following conditions:
      I. When an upper-division course is equivalent to a lower-division course used to satisfy a CSU GE requirement.
      II. When CSU uses an upper-division course in their CSU GE pattern.
3. Transfer credit and coursework may be applied towards the requirements of a degree or certificate program. Students are strongly encouraged to make a counseling appointment to determine applicability of courses taken elsewhere towards their program at DVC.
4. When courses completed at other institutions are determined to be equivalent to DVC courses but their unit value varies, students will not be required to “make up” missing units for DVC GE, major and/or certificate requirements. Students are always required to complete a minimum of 18 semester units for both major and general education requirements with three semester units in each GE area and 60 semester units for a degree.
5. Transfer coursework may be used to meet prerequisites at Diablo Valley College. See the information on prerequisites on page 17.
6. Transfer credit and DVC credit together determine the student’s overall GPA when applied to academic program requirements and financial aid and athletic eligibility. DVC will use plus/minus grades in GPA calculation.
7. Transfer credit from colleges and universities with different credit systems (quarter units) are converted to semester hours of credit.
8. DVC may accept Advanced Placement (AP), International Baccalaureate (IB) and College Level Examination Program (CLEP) scores to meet DVC general education and Transfer Studies certificate of achievement requirements as well as CSU GE and IGETC requirements. See the charts beginning on page 20. Students who wish to have AP, IB or CLEP scores evaluated by DVC must submit official score reports for consideration.

9. Coursework and credits that may transfer will be determined based on an evaluation that may include but is not limited to: course content, objectives, student learning outcomes, units, grades, course level and applicability toward degree, certificate or pre-requisite requirements, as well as CSU GE and IGETC requirements.

10. Foreign transfer credit may be applied toward the 60-unit requirement for the DVC associate degree only after an evaluation by an approved credential evaluation service (for a list see: www.naces.org). Students are advised to meet with a counselor and obtain guidelines from DVC admissions and records before requesting such an evaluation. Evaluations must include a course-by-course report with semester unit equivalencies, distinguishing between upper and lower division coursework and including letter grades. Students who wish foreign coursework to be used to meet specific course requirements for prerequisites, DVC majors, general education, or certificate requirements must provide detailed course descriptions. Foreign coursework cannot be used to certify California State University General Education (CSU GE) or IGETC requirements, except for the IGETC “language other than English” requirement. Transfer of credit policy varies from institution to institution. Students who intend to transfer are advised to review the policy of the receiving institution.

**Course substitution**

Students may petition to substitute coursework completed within the Contra Costa Community College District and at other accredited institutions to meet DVC degree and certificate requirements. In order to initiate the process, students must submit the Petition for Course Substitution to the DVC Admissions and Records Office. The Admissions and Records Office will forward the Petition for Course Substitution to the appropriate faculty for approval. Course substitutions are used for courses that are not equivalent in content to a program requirement.

Students are advised to meet with a counselor or program advisor to discuss the course substitution option and to complete the petition process well before they plan to apply for a degree or certificate. Students may be approved to substitute a course prior to completing the course. Students petitioning to substitute coursework from outside the district must provide official transcripts from such institutions; it is not necessary to provide documentation to substitute coursework completed within the Contra Costa Community College District.

Only courses and credit from accredited institutions will be considered for application to DVC degree and certificate requirements. When courses are substituted and their unit value varies, students will not be required to “make up” missing units for DVC GE, major, and/or certificate requirements. Students are always required to complete a minimum of 15 semester units for major and general education requirements, with three semester units in each area, and 60 semester units for a degree.

For certificate programs, at least twenty-five percent of the required courses must be completed at DVC.

**Course substitution policy for students with disabilities for DVC associate degrees or certificates**

Students, because of their disabilities, may be unable to complete a course required of DVC’s associate degree or certificate programs. Those wishing to apply for a course substitution should review the college’s complete course substitution policy. This policy is available in the Disability Support Services (DSS) Office. To initiate an application, please make a counseling appointment with a DSS counselor by calling 925-969-2140.

**Alternatives to course credit**

DVC recognizes that some students have already reached a portion of their educational objectives through prior coursework. DVC offers five options for students to receive alternatives to course credit: advanced placement, international baccalaureate, CLEP, credit by exam, and military service credit.

Units awarded under any of the categories below may not be used to meet the residency requirement for the associate degrees.

**Advanced placement - for transfer requirements**

Each four-year college or university determines the amount of credit that will be given for AP examinations and how that credit may be used. Students planning to transfer should consult the catalog of the college to which they plan to transfer for information on how these examinations can be used to meet admission, general education, and major requirements.

For students planning to transfer to a University of California or California State University campus, refer to the CSU GE and IGETC charts beginning on page 20 for use of AP exam credit towards meeting these general education requirements.
The 2017-18 requirements were not available at time of catalog publication, please see a counselor for most current information.

### Diablo Valley College

**College Credit for Advanced Placement (AP) Tests 2016-2017**

Students may earn credit for College Entrance Examination Board Advanced Placement (AP) Tests with scores of 3, 4, or 5. AP credit can be used to meet IGETC, CSU GE, and AA/AS general education (GE). Students must have the College Board send AP exam results to the Admissions Office (hand-carried copies will not be accepted) for use on the AA/AS or GE patterns.

All Units Denote Semester.

<table>
<thead>
<tr>
<th>AP Exam</th>
<th>Minimum AP Score</th>
<th>AA/AS DVC GE Area Units</th>
<th>Units for DVC Associate Degree</th>
<th>CSU GE Areas Units</th>
<th>CSU Credit</th>
<th>IGTEC GE Areas Units</th>
<th>UC Credit</th>
<th>UC Limitations toward Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art History</td>
<td>3</td>
<td>Area III – Arts and Humanities 3 units</td>
<td>6</td>
<td>C1 or C2 3 units</td>
<td>6</td>
<td>3A or 3B 3 units</td>
<td>5.3</td>
<td>5.3 semester units max for all exams</td>
</tr>
<tr>
<td>Art, Studio</td>
<td>2-D Design</td>
<td>No GE Area</td>
<td>3</td>
<td>No GE Area</td>
<td>3</td>
<td>No GE Area</td>
<td>5.3</td>
<td>5.3</td>
</tr>
<tr>
<td>Biology</td>
<td>3</td>
<td>Area II – Natural Sciences 4 units</td>
<td>6</td>
<td>B1 and B3 4 units</td>
<td>6</td>
<td>5A and 5C 4 units</td>
<td>5.3</td>
<td>5.3</td>
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<tr>
<td>Chemistry</td>
<td>3</td>
<td>Area II – Natural Sciences 4 units</td>
<td>6</td>
<td>B1 and B3 4 units</td>
<td>6</td>
<td>5A and 5C 4 units</td>
<td>5.3</td>
<td>5.3</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Computer Science A</td>
<td>No GE Area</td>
<td>6 units max for both Computer Science exams</td>
<td>3</td>
<td>6 units if taken prior to F09</td>
<td>3</td>
<td>No GE Area</td>
<td>5.3</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Computer Science AB</td>
<td>No GE Area</td>
<td>6 units max for both Computer Science exams</td>
<td>6</td>
<td>No GE Area</td>
<td>6</td>
<td>No GE Area</td>
<td>2.7</td>
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<tr>
<td>Economics</td>
<td>3</td>
<td>Area IV - Social and Behavioral Sciences 3 units</td>
<td>3</td>
<td>D2 3 units</td>
<td>3</td>
<td>4B 3 units</td>
<td>2.7</td>
<td>2.7</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>3</td>
<td>Area IV - Social and Behavioral Sciences 3 units</td>
<td>3</td>
<td>D2 3 units</td>
<td>3</td>
<td>4B 3 units</td>
<td>2.7</td>
<td>2.7</td>
</tr>
<tr>
<td>English</td>
<td>3</td>
<td>Area IA - English Composition 3 units</td>
<td>6</td>
<td>A2 3 units</td>
<td>6</td>
<td>1A 3 units</td>
<td>5.3</td>
<td>5.3 semester units for both English Lang/Comp and Lit/Comp</td>
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<tr>
<td>English Literature and Composition</td>
<td>3</td>
<td>Area IA - English Composition 3 units</td>
<td>6</td>
<td>A2 and C2 6 units</td>
<td>6</td>
<td>1A or 3B 3 units</td>
<td>5.3</td>
<td>5.3</td>
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<tr>
<td>Environmental Science</td>
<td>3</td>
<td>Area II – Natural Sciences 4 units</td>
<td>4</td>
<td>B1 and B3 4 units</td>
<td>4</td>
<td>5A and 5C 3 units</td>
<td>2.7</td>
<td>2.7</td>
</tr>
</tbody>
</table>

1 If a student passes more than one AP exam in calculus or computer science, only one examination may be applied to the baccalaureate.
The 2017-18 requirements were not available at time of catalog publication, please see a counselor for most current information.

<table>
<thead>
<tr>
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<th>IGETC GE Areas Units</th>
<th>UC Credit</th>
<th>UC Limitations toward Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government and Politics</td>
<td></td>
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<tr>
<td>Comparative</td>
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<td>D8 3 units</td>
<td>3</td>
<td>4H 3 units</td>
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<tr>
<td>United States</td>
<td>3</td>
<td>Area IV - Social and Behavioral Sciences 3 units</td>
<td>3</td>
<td>D8 and US-2 3 units</td>
<td>3</td>
<td>4H and US-2 3 units</td>
<td>2.7</td>
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</tr>
<tr>
<td>History</td>
<td></td>
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<td>European History</td>
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<td>6</td>
<td>C2 or D6 3 units</td>
<td>6</td>
<td>3B or 4F 3 units</td>
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<tr>
<td>United States History</td>
<td>3</td>
<td>Area III - Arts and Humanities or Area IV - Social and Behavioral Sciences 3 units</td>
<td>6</td>
<td>(C2 or D6) and US-1 3 units</td>
<td>6</td>
<td>(3B or 4F) and US-1 3 units</td>
<td>5.3</td>
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<td>3B or 4F 3 units</td>
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<td>Human Geography</td>
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<td>D5 3 units</td>
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<td>4E 3 units</td>
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<tr>
<td>French Language (Only if taken prior to F11)</td>
<td>3</td>
<td>Area III - Arts and Humanities 3 units</td>
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<td>C2 3 units</td>
<td>6</td>
<td>3B and 6A 3 units</td>
<td>5.3</td>
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<td>French Language and Culture</td>
<td>3</td>
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<td>C2 3 units</td>
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<td>3B and 6A 3 units</td>
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<td>French Literature (Only if taken prior to F09)</td>
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<td>Area III - Arts and Humanities 3 units</td>
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<td>C2 3 units</td>
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<td>3B and 6A 3 units</td>
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<tr>
<td>German Language (Only if taken prior to F11)</td>
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<td>3B and 6A 3 units</td>
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<td>C2 3 units</td>
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<td>3B and 6A 3 units</td>
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<tr>
<td>Italian Language and Culture</td>
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<td>3B and 6A 3 units</td>
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<td>Japanese Language and Culture</td>
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<td>C2 3 units</td>
<td>6</td>
<td>3B and 6A 3 units</td>
<td>5.3</td>
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<th>UC Credit</th>
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<td>Latin</td>
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<td>6 2A</td>
<td>C2 3 units</td>
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<td>C2 3 units</td>
<td>3 3B and 6A 3 units</td>
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<td>Latin Literature (Only if taken prior to F09)</td>
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<td>Area III - Arts and Humanities 3 units</td>
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<td>C2 3 units</td>
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<tr>
<td>Spanish Language (Only if taken prior to S14)</td>
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<td>Spanish Language and Culture</td>
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<td>6</td>
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<td>6 3B and 6A 3 units</td>
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<td>Spanish Literature and Culture</td>
<td>3</td>
<td>Area III - Arts and Humanities 3 units</td>
<td>6</td>
<td>C2 3 units</td>
<td>6 3B and 6A 3 units</td>
<td>5.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Calculus AB</td>
<td>3</td>
<td>Area IB - Communication and Analytical Thinking 3 units and Area IC - Mathematics Comprehension</td>
<td>3</td>
<td>6 units max for both Calculus exams</td>
<td>3B 3 units</td>
<td>2A 3 units</td>
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<tr>
<td>Calculus BC</td>
<td>3</td>
<td>Area IB - Communication and Analytical Thinking 3 units and Area IC - Mathematics Comprehension</td>
<td>6</td>
<td>6 units max for both Calculus exams</td>
<td>6B 3 units</td>
<td>2A 3 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Calculus BC/AB Subscore</td>
<td>3</td>
<td>Area IB - Communication and Analytical Thinking 3 units and Area IC - Mathematics Comprehension</td>
<td>3</td>
<td>6 units max for both Calculus exams</td>
<td>3 3 units</td>
<td>2A 3 units</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>Music Theory</td>
<td>3</td>
<td>No GE Area</td>
<td>6 2A</td>
<td>C1 3 units</td>
<td>6 3B and 6A 3 units</td>
<td>5.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Only if taken prior to F09)
If a student passes more than one AP exam in physics, only six units of credit may be applied to the baccalaureate, and only four units of credit may be applied to a certification in GE Breadth.

### AP Exam Minimum AP Score

<table>
<thead>
<tr>
<th>AP Exam</th>
<th>Minimum AP Score</th>
<th>AA/AS DVC GE Area Units</th>
<th>Units for DVC Associate Degree</th>
<th>CSU GE Areas Units</th>
<th>CSU Credit</th>
<th>IGETC GE Areas Units</th>
<th>UC Credit</th>
<th>UC Limitations toward Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physics 1</td>
<td>3</td>
<td>Area II - Natural Sciences 4 units</td>
<td>4</td>
<td>B1 and B3^2 4 units</td>
<td>4</td>
<td>SA and SC 3 units</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>Physics 2</td>
<td>3</td>
<td>Area II - Natural Sciences 4 units</td>
<td>6</td>
<td>B1 and B3^2 4 units</td>
<td>6</td>
<td>SA and SC 4 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Physics B (Only if taken prior to F15)</td>
<td>3</td>
<td>Area II - Natural Sciences 4 units</td>
<td>6</td>
<td>B1 and B3^2 4 units</td>
<td>6</td>
<td>SA and SC 4 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Physics C: Electricity and Magnetism</td>
<td>3</td>
<td>Area II - Natural Sciences 4 units</td>
<td>4</td>
<td>B1 and B3^2 4 units</td>
<td>4</td>
<td>SA and SC 3 units</td>
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</tr>
<tr>
<td>Physics C: Mechanics</td>
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<td>Area II - Natural Sciences 4 units</td>
<td>6</td>
<td>B1 and B3^2 4 units</td>
<td>4</td>
<td>SA and SC 3 units</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>3</td>
<td>Area IV - Social and Behavioral Sciences 3 units</td>
<td>3</td>
<td>D9 3 units</td>
<td>3</td>
<td>4I 3 units</td>
<td>2.7</td>
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<tr>
<td>Seminar</td>
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<td>No GE Area</td>
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</tr>
<tr>
<td>Statistics</td>
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<td>Area IB - Communication and Analytical Thinking 3 units and Area IC - Mathematics Comprehension</td>
<td>3</td>
<td>B4 3 units</td>
<td>3</td>
<td>2A 3 units</td>
<td>2.7</td>
<td></td>
</tr>
</tbody>
</table>

Approved by Curriculum Committee February 8, 2016.

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2 If a student passes more than one AP exam in physics, only six units of credit may be applied to the baccalaureate, and only four units of credit may be applied to a certification in GE Breadth.
The 2017-18 requirements were not available at time of catalog publication, please see a counselor for most current information.

Students may earn credit for College-Level Examination Program (CLEP) exams with scores of 50 or higher. CLEP credit can be used to meet CSU GE and AA/AS general education (GE) and/or major requirements. Students must have College Board send CLEP exam results to the Admissions Office (hand-carried copies will not be accepted) for use on the AA/AS or GE patterns. UC does not accept CLEP exams.

All Units Denote Semester.

<table>
<thead>
<tr>
<th>CLEP Exam</th>
<th>CLEP Score</th>
<th>AA/AS DVC GE Area Units</th>
<th>Units for DVC Associate Degree</th>
<th>CSU GE Areas Units</th>
<th>CSU Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Government</td>
<td>50</td>
<td>Area IV - Social and Behavioral Sciences</td>
<td>3</td>
<td>D8</td>
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</tr>
<tr>
<td>Biology</td>
<td>50</td>
<td>Area II – Natural Sciences</td>
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<td>B2</td>
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</tr>
<tr>
<td>Business</td>
<td>50</td>
<td>Financial Accounting</td>
<td>3</td>
<td>No GE Area</td>
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</tr>
<tr>
<td>Information Systems and Computer Applications</td>
<td>50</td>
<td>No GE Area</td>
<td>3</td>
<td>No GE Area</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Business Law</td>
<td>50</td>
<td>No GE Area</td>
<td>3</td>
<td>No GE Area</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Accounting</td>
<td>50</td>
<td>No GE Area</td>
<td>3</td>
<td>No GE Area</td>
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</tr>
<tr>
<td>Principles of Management</td>
<td>50</td>
<td>No GE Area</td>
<td>3</td>
<td>No GE Area</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Marketing</td>
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<td>No GE Area</td>
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<tr>
<td>Chemistry</td>
<td>50</td>
<td>Area II – Natural Sciences</td>
<td>3</td>
<td>No GE Area</td>
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<tr>
<td>Economics</td>
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<td>Area IV - Social and Behavioral Sciences</td>
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<td>D2</td>
<td>3</td>
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<tr>
<td>Principles of Macroeconomics</td>
<td>50</td>
<td>Area IV - Social and Behavioral Sciences</td>
<td>3</td>
<td>D2</td>
<td>3</td>
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<tr>
<td>Principles of Microeconomics</td>
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<td>D2</td>
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<tr>
<td>English¹</td>
<td>50</td>
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<td>C2</td>
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<tr>
<td>American Literature</td>
<td>50</td>
<td>Area III – Arts and Humanities</td>
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<td>C2</td>
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<tr>
<td>Analyzing and Interpreting Literature</td>
<td>50</td>
<td>Area III – Arts and Humanities</td>
<td>3</td>
<td>C2</td>
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<tr>
<td>English Literature (Only if taken prior to F11)</td>
<td>50</td>
<td>Area III – Arts and Humanities</td>
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<tr>
<td>History²</td>
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<td>Area IV - Social and Behavioral Sciences</td>
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<td>D6 and US-1</td>
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<tr>
<td>United States I</td>
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<td>Area IV - Social and Behavioral Sciences</td>
<td>3</td>
<td>D6 and US-1</td>
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<tr>
<td>United States II</td>
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<td>3</td>
<td>D6 and US-1</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization I</td>
<td>50</td>
<td>Area III - Arts and Humanities or Area IV - Social and Behavioral Sciences</td>
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<td>D6</td>
<td>3</td>
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<tr>
<td>Western Civilization II</td>
<td>50</td>
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<td>D6</td>
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<tr>
<td>Human Growth and Development</td>
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<td>Area IV - Social and Behavioral Sciences</td>
<td>3</td>
<td>C2 or D6</td>
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</tbody>
</table>

¹ CLEP College Composition, College Composition – Modular, English Composition (no essay), English Composition with Essay and Freshman College Composition are not accepted for general education units or elective credits.

² CLEP Social Sciences and History exam is not accepted for general education units or elective credits.
<table>
<thead>
<tr>
<th>CLEP Exam</th>
<th>CLEP Score</th>
<th>AA/AS DVC GE Area Units</th>
<th>Units for DVC Associate Degree</th>
<th>CSU GE Areas Units</th>
<th>CSU Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td></td>
<td>Area III – Arts and Humanities 3 units</td>
<td>3</td>
<td>C2 3 units</td>
<td>3</td>
</tr>
<tr>
<td>Language Other than English</td>
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</tr>
<tr>
<td>French Level I</td>
<td>50</td>
<td>No GE Area</td>
<td>6</td>
<td>No GE Area</td>
<td>6</td>
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<tr>
<td>French Level II</td>
<td>59</td>
<td>Area III – Arts and Humanities 3 units</td>
<td>9</td>
<td>C2 3 units</td>
<td>9</td>
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<tr>
<td>(12 if taken prior to F15)</td>
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<td></td>
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<tr>
<td>German Level I</td>
<td>50</td>
<td>No GE Area</td>
<td>6</td>
<td>No GE Area</td>
<td>6</td>
</tr>
<tr>
<td>German Level II</td>
<td>60</td>
<td>Area III – Arts and Humanities 3 units</td>
<td>9</td>
<td>C2 3 units</td>
<td>9</td>
</tr>
<tr>
<td>(12 if taken prior to F15)</td>
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<td></td>
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<tr>
<td>Spanish Level I</td>
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<td>No GE Area</td>
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<td>No GE Area</td>
<td>6</td>
</tr>
<tr>
<td>Spanish Level II</td>
<td>63</td>
<td>Area III – Arts and Humanities 3 units</td>
<td>9</td>
<td>C2 3 units</td>
<td>9</td>
</tr>
<tr>
<td>(12 if taken prior to F15)</td>
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<td></td>
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<tr>
<td>Mathematics</td>
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<tr>
<td>Calculus</td>
<td>50</td>
<td>Area IB – Communication and Analytical Thinking 3 units and Area IC – Mathematics Comprehension</td>
<td>3</td>
<td>B4 3 units</td>
<td>3</td>
</tr>
<tr>
<td>College Algebra</td>
<td>50</td>
<td>Area IB - Communication and Analytical Thinking 3 units and Area IC – Mathematics Comprehension</td>
<td>3</td>
<td>B4 3 units</td>
<td>3</td>
</tr>
<tr>
<td>College Algebra – Trigonometry</td>
<td>50</td>
<td>Area IB - Communication and Analytical Thinking 3 units and Area IC – Mathematics Comprehension</td>
<td>3</td>
<td>B4 3 units</td>
<td>3</td>
</tr>
<tr>
<td>Pre-Calculus</td>
<td>50</td>
<td>Area IB - Communication and Analytical Thinking 3 units and Area IC – Mathematics Comprehension</td>
<td>3</td>
<td>B4 3 units</td>
<td>3</td>
</tr>
<tr>
<td>Trigonometry</td>
<td>50</td>
<td>Area IB - Communication and Analytical Thinking 3 units and Area IC – Mathematics Comprehension</td>
<td>3</td>
<td>B4 3 units</td>
<td>3</td>
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<td>(Only if taken prior to F06)</td>
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<tr>
<td>Natural Sciences</td>
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<tr>
<td>Psychology</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introductory Psychology</td>
<td>50</td>
<td>Area IV - Social and Behavioral Sciences 3 units</td>
<td>3</td>
<td>B9 3 units</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Educational Psychology</td>
<td>50</td>
<td>Area IV - Social and Behavioral Sciences 3 units</td>
<td>3</td>
<td>B10 3 units</td>
<td>3</td>
</tr>
</tbody>
</table>

Approved by Curriculum Committee February 8, 2016.

* If a student passes more than one CLEP test in the same language other than English (e.g., two exams in French), then only one examination may be applied to the baccalaureate. For each test in a language other than English, a passing score of 50 is considered “Level I” and earns six units of baccalaureate credit; the higher score listed for each test is considered “Level II” and earns additional units of credit and placement in Area C2 of GE Breadth, as noted.

* CLEP College Mathematics exam is not accepted for general education units or elective credits.
Diablo Valley College

**College Credit for International Baccalaureate (IB) Exams 2016-2017**

Students may earn credit for International Baccalaureate (IB) Higher Level exams with scores of 5, 6, or 7. IB credit can be used to meet IGETC, CSU GE, and AA/AS general education (GE). Students must have the International Baccalaureate Organization send IB exam results to the Admissions Office (hand-carried copies will not be accepted) for use on the AA/AS or GE patterns.

All Units Denote Semester.

<table>
<thead>
<tr>
<th>IB Exam</th>
<th>Minimum IB Score</th>
<th>AA/AS DVC GE Area Units</th>
<th>Units for DVC Associate Degree</th>
<th>CSU GE Areas Units</th>
<th>CSU Credit</th>
<th>IGETC GE Areas Units</th>
<th>UC Credit</th>
<th>UC Limitations toward Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology HL</td>
<td>5</td>
<td>Area II - Natural Sciences 3 units</td>
<td>6</td>
<td>B2 3 units</td>
<td>6</td>
<td>5B 3 units</td>
<td>5.3</td>
<td>The units granted for IB exams are not counted toward the maximum number of credits required for declaration of a major or the maximum number of units a student may accumulate prior to graduation. Students who enter the UC with IB credit do not have to declare a major earlier than other students, nor are they required to graduate earlier.</td>
</tr>
<tr>
<td>Chemistry HL</td>
<td>5</td>
<td>Area II - Natural Sciences 3 units</td>
<td>6</td>
<td>B1 3 units</td>
<td>6</td>
<td>5A 3 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Economics HL</td>
<td>5</td>
<td>Area IV - Social and Behavioral Sciences 3 units</td>
<td>6</td>
<td>D2 3 units</td>
<td>6</td>
<td>4B 3 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Geography HL</td>
<td>5</td>
<td>Area IV - Social and Behavioral Sciences 3 units</td>
<td>6</td>
<td>D5 3 units</td>
<td>6</td>
<td>4E 3 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>History (any region) HL</td>
<td>5</td>
<td>Area III - Arts and Humanities or Area IV - Social and Behavioral Sciences 3 units</td>
<td>6</td>
<td>C2 or D6 3 units</td>
<td>6</td>
<td>3B or 4F 3 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Language A1 (any language, except English) HL</td>
<td>5 or 6</td>
<td>Area III - Arts and Humanities 3 units</td>
<td>6</td>
<td>C2 3 units</td>
<td>6</td>
<td>3B and 6A 3 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Language A2 (any language, except English) HL</td>
<td>5 or 6</td>
<td>Area III - Arts and Humanities 3 units</td>
<td>6</td>
<td>C2 3 units</td>
<td>6</td>
<td>3B and 6A 3 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Language A Literature HL (Prior to F13 known as Language A1 (any language) HL)</td>
<td>5</td>
<td>Area III - Arts and Humanities 3 units</td>
<td>6</td>
<td>C2 3 units</td>
<td>6</td>
<td>3B 3 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Language A Language and Literature HL (Prior to F13 known as Language A2 (any language) HL)</td>
<td>5</td>
<td>Area III - Arts and Humanities 3 units</td>
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<td>C2 3 units</td>
<td>6</td>
<td>3B 3 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Language B (any language) HL</td>
<td>5</td>
<td>Area III - Arts and Humanities 3 units</td>
<td>6</td>
<td>No GE Area</td>
<td>6</td>
<td>6A 3 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Mathematics HL</td>
<td>5</td>
<td>Area IB - Communication and Analytical Thinking 3 units and Area IC - Mathematics Comprehension</td>
<td>6</td>
<td>B4 3 units</td>
<td>6</td>
<td>2A 3 units</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Physics HL</td>
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<td>Area II - Natural Sciences 3 units</td>
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<td>B1 3 units</td>
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<td>5A 3 units</td>
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<td></td>
</tr>
<tr>
<td>Psychology HL</td>
<td>5</td>
<td>Area IV - Social and Behavioral Sciences 3 units</td>
<td>3</td>
<td>D9 3 units</td>
<td>3</td>
<td>4F 3 units</td>
<td>5.3</td>
<td></td>
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<tr>
<td>Theatre HL</td>
<td>5</td>
<td>Area III - Arts and Humanities 3 units</td>
<td>6</td>
<td>C1 3 units</td>
<td>6</td>
<td>3A 3 units</td>
<td>5.3</td>
<td></td>
</tr>
</tbody>
</table>

Approved by Curriculum Committee 12-8-2014

1 For CSU, an IB score of 4 or higher may meet this requirement.
2 The IB curriculum offers language at various levels for native and non-native speakers. Language B courses are offered at the intermediate level for non-natives. Language A1 and A2 are advanced courses in literature for native and non-native speakers, respectively.
Credit by exam

Students may earn credit through examinations available through DVC academic departments. These examinations are usually more comprehensive than the typical final examination for a course, and they may be prepared by national organizations.

To take these examinations students must submit a “Petition for Credit by Examination” form, available at the division offices, to the department chair at least six weeks before the end of a fall or spring term. The department chair approves or denies the petition within five days and returns the form to the student. The student submits the form and pays the course fee to the Admissions and Records Office. They will forward the form to the department chair. Arrangements for administration of the examination will be made by department faculty. The examination itself may take any appropriate form such as written, oral, portfolio, demonstration, or a combination of methods.

In addition:

- The student should not already have taken the course or attempted an examination in the course whether at DVC or elsewhere.
- A maximum of 12 units toward an associate degree or six units toward a certificate may be earned by courses for which credit has been earned by examination.
- Credits earned by examination cannot be used to satisfy the 12-unit residence requirement for the associate degree.
- The student’s academic record shall be clearly annotated to reflect that credit was earned by examination.
- A student may only petition to take the examination once.
- The course must not be a prerequisite for one the student has already taken or is now enrolled in.
- The student will be charged a fee for the examination equivalent to the enrollment fee for the class, with exception granted to adult school students who are eligible to receive college credit per an active articulation agreement with DVC.

Grading shall be according to the regular grading system. If a student passes the examination, a grade is recorded on his or her permanent record with the notation “credit by examination”. If a student fails, that failure is recorded on the permanent record and the student is not allowed to take the examination again. Substandard grades may be remediated by enrolling in the course. The petition form is retained in the student’s permanent file.

Military service credit

Veterans may apply for evaluation of military service for credit through the Admissions and Records Office. Credit may be granted toward an associate degree for the following training:

- Six units of elective credit for the completion of basic training and one year or more of active duty in the military service upon submission of DD-214 (separation papers) with a discharge other than dishonorable, to the Admissions and Records Office.
- Three of the six elective units may be applied towards the fulfillment of CSU General Education requirement “E. Lifelong Understanding and Self Development.”

ROTC

All DVC students interested in becoming commissioned officers in the United States Air Force, Army, or Navy may register for lower-division military science courses at UC Berkeley and have these credits applied toward a DVC’s associate degree. Credit is granted initially through UC Extension, but will be applied toward an associate degree at DVC when a transcript is received. Interested students should call UC Berkeley for more information.

Attendance policy

Students are expected to attend all class meetings, regardless of whether the instructor takes attendance. The instructor may drop students who miss more than the equivalent of two weeks of a term-length course. Students must contact the instructor to inform him or her of an absence. The college does not relay such messages.

Attendance at the first class meeting

If a student wishes to secure a place in class, he or she must attend the first class meeting. The instructor may drop students who do not attend the first class meeting, thereby opening a space for students wishing to add the class. If students do not attend the first class meeting, it is still their responsibility to officially drop the class.

Field trips

If participating in a class field trip or other college sponsored activity causes a student to miss other classes, the student will not be penalized for the absence. Students must be allowed to make up any class work or point earning opportunities that they have missed (including exams, quizzes, and participation points) provided they have notified their instructor a minimum of two weeks in advance of their impending absence (or as soon as possible if there are extenuating circumstances such as post-season intercollegiate competition, rain make-ups, or field trips within the first two weeks of the term).
Leave of absence

Students who need to take a leave of absence during the term may obtain the request form from the DVC website at www.dvc.edu/studentleave and then receive written approval from each of their instructors. Then the student must discuss the petition with a counselor and obtain their signature, as well as the signature of the vice president of student services. A leave of absence is limited to 10 instructional days. Instructors may drop students who have been absent for more than the equivalent of two weeks of instruction without an approved leave of absence.

Grading

Grade policy

The assignment of grades is the exclusive responsibility of the individual instructor. DVC grading policies are based on the faculty’s philosophy, California Administration Code, Title 5 (Sec. 51300-51325), and the Contra Costa Community College District Board Policy 4001.

DVC uses the following evaluative grades and non-evaluative symbols:

Grade policy

<table>
<thead>
<tr>
<th>Grade</th>
<th>Evaluative Symbols</th>
<th>Grade points per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Passing, less than satisfactory (Not a recommending grade for continuation in sequential courses)</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failing</td>
<td>0</td>
</tr>
</tbody>
</table>

Grades earned on non degree applicable courses are not included in the degree applicable grade point average.

Academic honors

Students who have completed at least 12 letter-graded units during the term and earned a grade point average of at least 3.0 will receive honors recognition on their transcripts.

Graduation honors

Graduation honors will appear on a student’s transcript if a 3.5 grade point average in all college work (excluding non degree applicable and upper division courses) is maintained at the end of the semester in which the student has applied to graduate. A student intending to graduate in the spring semester must have a 3.5 grade point average as of February 1 for honors to appear in the ceremony program, but the 3.5 grade point average must be maintained at the end of the semester to have honors appear on the student’s transcript.

Incomplete grades

Incomplete grades are assigned only in cases of emergency such as accident, illness, or family emergency. An incomplete contract must be completed by the instructor and accepted by the student at the time the grade is posted. The instructor, student, and division dean must all sign the contract, which is then submitted to the Admissions and Records Office. Students who receive an incomplete grade cannot register for the same course in which they received the incomplete. The incomplete grade must be resolved no later than one calendar year following the grade assignment or it will automatically revert to the alternate grade assigned by the instructor per the contract. Extensions to the one-year deadline may be granted for good cause with instructor approval. The instructor must notify the Admissions and Records Office of the extension prior to the expiration of the incomplete.

Pass/no pass grades (P/NP)

These grades are not used in the calculation of grade point averages, although the units for P grades are applied toward the 60 required for an associate degree. Four-year colleges often limit the number of P units that they will accept from transfer students. To determine if there are any negative implications to choosing a P/NP grading, students are advised to refer to the policies of the college to which they intend to transfer. P/NP grade option cannot be reversed after 25 percent of the class has passed.
Academic requirements and policies

Student choice (SC)
A course labeled “SC” means that before the deadline, students can decide to take the course for a letter grade or for a P/NP grade. Students must complete a form in the Admissions and Records Office to take the course for a P/NP grade. If students do not choose the P/NP option before the deadline, they will be issued a letter grade for the course. It is often best to discuss this choice with a counselor.

Students have until the fourth week of the class (or 25 percent of the term for shorter classes) to decide. After the deadline has passed, the grading choice may not be reversed.

Non credit courses
Non credit courses are open to all students for registration. There are no enrollment fees for non credit courses, but an application for admission is necessary. Non credit courses are not graded and are non degree applicable.

Fairness in grading
During the first week of each class, instructors will give their students a copy of their class syllabus, which will include their grading policies. Students may expect instructors to:

• record the student’s grade for each oral and written test or report that will affect the final grade, notify the student of the grade, and if necessary, review the results with the student;
• evaluate the student within the first quarter of the class and notify the student of the results of the evaluation;
• count a final examination for no more than half the course grade;
• base final grades on at least three of the student’s tests and/or reports (exception in cases of violations of DVC’s academic dishonesty procedure 4001.04).

Note: Instructors are expected to retain any test or report that is not returned to a student for a period of one academic year. Grade records should be available for a period of three years after grades are awarded. Instructors who are not scheduled to teach should leave their records with their division dean.

Grade corrections
Students who believe that they have received an incorrect grade must initiate a grade correction within one calendar year after they received the grade. To have a grade corrected, students must ask the instructor to correct the grade and have them submit a grade correction form. The instructor has final authority to determine if the student’s grade should be changed.

Note: Except in extenuating circumstances such as serious illness, grade corrections may not be made from “F” to “W.” It is the student’s responsibility to withdraw from a class prior to the drop deadline.

Student appeals for grade changes
DVC is committed to the concept of academic freedom, which guarantees to individual instructors wide latitude in how they structure and conduct their classes. Such matters as the amount of homework, the kind and frequency of testing, the nature of the grading system, the degree of class participation expected, the choice of textbooks, the theoretical perspective, and the emphasized topics are all, within very wide boundaries, at the discretion of the instructor (described under “fairness of grading”).

Difficulties occasionally arise between students and faculty members about grades. Most misunderstandings are resolved amicably and the college urges students to discuss problems directly with faculty members. Because some disagreements cannot be resolved informally, DVC has a procedure for resolution of grade complaints that the student must initiate.

Grounds for grade changes
The most common problems are those concerning the grade assigned for class work. According to state law, a grade assigned by an instructor at the end of a term can be changed only by that instructor, except in cases of mistake, fraud, bad faith or incompetence. (A finding of bad faith should be supported by specific evidence that the instructor harbored ill-will or discriminatory intent, which motivated the instructor to assign to a student a grade lower than the grade the student should have earned based on objective criteria.) This policy does not apply to challenges of deadlines for pass (P) or no pass (NP). Pass/no pass grades cannot be changed to letter grades once 25 percent of the class has passed.

The informal steps below (1 and 2) may be undertaken at any time; however, a formal complaint must be filed in writing with the vice president of instruction, or designee, no later than one year following the end of the term in which the grade was given. A formal complaint may be filed at any time with the chancellor, who will refer the complainant to his designee, the DVC president. The president will designate the Complaint Review Committee to consider the complaint.
Process

If a clerical or tabulation error has been made, it can be handled through the grade correction process.

The “fairness in grading policy” section (under academic policies) clearly explains the grading guidelines a student can expect. At the beginning of each class, instructors must give students a copy of their grading policies.

If a student believes that a faculty member has deviated from these policies in the evaluation of his/her work, he/she may pursue a complaint under the description of mistake, fraud, bad faith, or incompetence. The student has the option of having a representative present at this and/or subsequent meetings.

1. In the event of a problem over a grade, the student should first meet with the instructor and request an explanation of the grade. If it is uncomfortable for the student to deal with an instructor alone, a person of the student’s choice may accompany him/her. If the instructor agrees to a grade change he/she fills out a grade change report in accordance with grade change correction policy.

2. If the student and the instructor cannot resolve the problem, the next step is for the student to meet with the department chair, who will attempt to mediate the issue. If the department chair is unable to achieve settlement, the next step for the student is to meet with the division dean, who will attempt to mediate the issue. The mediation effort shall include a conference with the division dean, the department chairperson, the student and the faculty employee, if available, and/or individual or combined sequential meetings between the division dean and the department chairperson, the student and the faculty employee, if available. The student may have a representative present in either event. If the issue is not resolved to the satisfaction of the student, the division dean should prepare a written summary of the mediation efforts and forward it to the vice president of instruction for the continuation of the appeal process.

3. If the student is not satisfied with these mediation efforts, he/she may request a formal hearing before a complaint review committee, which is the president’s designee. The student must submit his/her complaint in writing and should include a precise statement of the nature of the complaint (mistake, fraud, bad faith or incompetence), any facts relevant to it, and the student’s perception of a fair resolution. The complaint must be filed with the vice president of instruction, or designee, no later than one year following the end of the term when the grade was given.

The complaint review committee will be composed of three faculty members appointed by the Faculty Senate, one of whom must be from the same division as the faculty member involved in the complaint, two students appointed by the ASDVC, and the vice president of instruction, or designee, who will act as chairperson. (All six shall be voting members.) A tie vote means the complaint is not proven. The results will be referred to the president.

The student may be accompanied by a representative.

a. The committee shall meet within 30 instructional days of receipt of a complaint. If the complaint is filed within four weeks of the end of a term, the meeting may be delayed at the option of either the student, the faculty member involved or the vice president of instruction until the next term. In this event, the committee shall meet within the first four weeks of the new term. If time constraints prevent the meeting at the end of spring term, the meeting shall be held within the first 20 instructional days of the fall term. If this delay would result in hardship for the student or faculty member, they should advise the vice president of instruction and may request the meeting take place at the earliest time the other party(ies) and the vice president are available. In closed hearing, the committee will hear testimony by the student, the faculty member, the division dean who attempted mediation, and any supporting witnesses that either the student or faculty member care to introduce. The burden of proof shall rest with the complainant. Documentation may also be submitted. Summary minutes will be taken; the hearing may be tape recorded, but only with the permission of all participants.

b. Within ten instructional days, the committee, under the direction of the vice president of instruction, or designee, will meet and recommend a resolution based on a majority vote of all six members. A written recommendation will be submitted to the college president within 15 instructional days of such meeting; a minority report, if any, must be noted. Copies of the recommendations will be sent to the student, the faculty member, and all members of the committee.

If the committee does find that fraud, bad faith, or incompetence led to a grading error, the rationale for the decision must be stated in the recommendations, and the committee must recommend a replacement grade to the president.

c. The president will review the committee’s recommendations, then notify the student, the faculty members, the members of the committee, the Faculty Senate president and the vice president of instruction or designee, of the college president’s decision within ten instructional days of its receipt.
4. If the complaint is denied, the student will be notified of his or her right to appeal the decision to the Contra Costa Community College District governing board within 30 calendar days of notification of the decision. If the complaint is upheld, the faculty member will be notified of his/her right to appeal the decision to the Contra Costa Community College District governing board, or designee, within 30 instructional days of notification of the decision. If an instructor fails to appeal a decision of the president sustaining the student’s complaint within 30 instructional days, the president shall order the grade in question to be expunged from the student’s records and enter in its place the grade deemed appropriate by the complaint review committee.

If the decision of the president is appealed and the governing board or designee sustains the student’s complaint, the president shall order the grade in question to be expunged from the student’s records and the grade deemed appropriate by the complaint review committee entered in its place.

5. The decision of the governing board or designee is final. All records of such hearings at any level shall be destroyed at the end of one year, unless the student initiates legal proceedings relative to the disputed grade within one year.

If the decision of the governing board or designee is unfavorable to the student, or if the student accepts an unfavorable decision of the complaint review committee, the student shall have the right to submit a written statement of objections to the grade, which shall become a part of the student’s records.

Steps for resolution of grade complaints:
1. Meet with instructor for an explanation. If unresolved, then,
2. Request department chair mediation. If unresolved, then,
3. Request division dean mediation. If unresolved, then,
4. Request formal hearing with complaint review committee by submitting a formal written complaint to the office of the vice president of instruction.
   a. Hearing with committee
   b. Committee recommendation to college president
   c. President’s review and decision
5. Student and faculty member have appeal rights.
6. Final decision.

Improving a grade point average

Course repetition
When students receive a substandard grade ("D," “F,” or “NP”) for a course, they may enroll in it a second time without being required to request permission. If it becomes necessary for students to attempt a course for the third time, they must request special permission to do so. This request may be made online at www.dvc.edu/petition-to-repeat. Under no circumstances may a student repeat a course more than two times to alleviate a substandard grade (Title 5, section 55042).

If a student repeats the same course one time, the previous grade will not be used in the GPA calculation. Should the student repeat the same course two or more times, only the two previous grades may be disregarded from the GPA calculation. When a course is repeated all grades will appear on the transcript. An "R" notation will appear next to the first grade, (and a second grade if the course is attempted three times) indicating that the course has been repeated.

Academic renewal without course repetition
Academic renewal allows students to have up to 24 units of substandard grades (“D,” “F,” or “NP”) excluded (without the student having to repeat the course) from their grade point averages. To be eligible, students must have completed 20 units of satisfactory work (“C” grade or better) that has been completed within the Contra Costa Community College District or any other accredited college or university, since receiving the last substandard grade (the unit count begins the term after the substandard grade is received, in-progress terms cannot be included). The student must not have received any “D’s”, “F’s” or “NP” since the substandard work (minimum 2.0 since substandard work). RD and I grades must be resolved before submitting a petition. Students interested in academic renewal should request a petition from the Admissions and Records Office (Title 5, section 55046) and must have a counselor sign the form before submitting it to the Admissions and Records Office.

Academic renewal may be granted one time within the Contra Costa Community College District. Once applied, academic renewal may not be reversed.

Instructors’ rights policy
If a student is disrupting class, the instructor may have him or her removed, and the instructor may also remove that student from the next class meeting. For more information about removal, see the “student code of conduct” section.

The instructor must give permission before a student can record in class using an audio or video device.

Instructors have the exclusive responsibility for assigning grades. For more information, see the “grade policy” section of the catalog.
Instructors’ withdrawal option

Students who miss the first meeting of a class may be dropped by the instructor. Any student who is absent the equivalent of two weeks of a term-length class without an acceptable excuse may also be dropped by the instructor. In these cases the student may be able to re-enter the class if the instructor agrees and signs an Instructor Reinstate Form, reinstating the student. This decision is entirely up to the instructor.

Note: There is no automatic withdrawal process, and students may receive an “F” grade for the course if they do not officially drop the class prior to the deadline. An “F” grade may not be changed to a “W” grade except in the case of documented extenuating circumstances such as serious illness or military deployment.

Probation and dismissal policy

Academic probation

Students are expected to make steady progress toward their educational goals by maintaining a “C” average or higher in their courses. If a student’s cumulative record shows that he or she has completed at least 12 letter-graded units, that student must maintain a grade point average of at least 2.0, or be placed on academic probation. Students on stage one probation will be mailed information encouraging them to view a short probation video and to schedule a meeting with a counselor. Students on stage two probation will be blocked from enrollment in future semesters until they have either arranged a meeting with a counselor to develop a plan for improvement or reviewed the information on the DVC website at www.dvc.edu/communication/policies/academic/probation-dismissal.html and passed a short quiz.

Progress probation

Students are expected to complete courses once they register for them. If a student’s cumulative record shows that he or she has enrolled in at least 12 units, that student must successfully complete more than 50 percent of all those units, or else be placed on progress probation. Students are placed on progress probation if the number of units given a “W,” “I,” or “NP” on the student’s transcript amounts to at least 50 percent of the units attempted (this includes letter grades and units assigned the symbols “W,” “I,” “P,” “NP,” “IP,” or “RD”). Students on stage one probation will be encouraged to view a short probation video and schedule a meeting with a counselor. Students on stage two probation will be blocked from enrollment in future semesters until they have either arranged a meeting with a counselor to develop a plan for improvement or reviewed the information on the DVC website at www.dvc.edu/communication/policies/academic/probation-dismissal.html and passed a short quiz.

Academic dismissal

Students are subject to academic dismissal if, after they have been on academic probation for two consecutive terms, their grade point average in the most recent term is not 2.0 or higher. When students complete more than half of their cumulative attempted units, they are removed from probation. Students on dismissal status are prohibited from attending DVC for two consecutive terms.

Appeals and readmission

Students who are placed on probation or dismissal are notified in writing. The notification includes the process for appealing the dismissal to the dean of counseling and enrollment services or SRC dean. Dismissed students who wish to appeal their dismissal status must watch a brief video explaining the probation process and file a “request for reinstatement” form with the dean of counseling and enrollment services. Extenuating circumstances that would allow students to successfully appeal dismissal might include, but are not limited to, health problems, family emergency or extreme change in financial situation.

STUDENT RIGHTS AND RESPONSIBILITIES

Academic integrity policy

Diablo Valley College is committed to creating an environment where student achievement is championed and celebrated. Because the college values academic integrity as an essential component of academic excellence, students are expected to be truthful and ethical in their academic work. Commitment to academic integrity is the responsibility of every student and faculty member at Diablo Valley College.
Faculty and students come from a variety of backgrounds and cultures, giving rise to different understandings of moral and ethical behavior. Faculty should clearly state well-defined standards to reduce uncertainty and clarify expectations.

Academic dishonesty is defined as: an act of deception in which a student claims credit for the work or effort of another person or uses unauthorized materials or fabricated information in any academic work. Academic dishonesty is a violation of the DVC Student Code of Conduct and will not be tolerated. Academic dishonesty diminishes the quality of scholarship at Diablo Valley College and hurts the majority of students who conduct themselves honestly.

Acts of academic dishonesty include, but are not limited to, the following:

- **Cheating** - unauthorized copying or collaboration on a test or assignment, or the use or attempted use of unauthorized materials;
- **Tampering** - altering or interfering with evaluation instruments and documents including transcripts;
- **Fabrication** - falsifying experimental data or results, inventing research or laboratory data or results for work not done, or falsely claiming sources not used; or falsifying participation in a class in any way;
- **Plagiarism** - representing someone else’s words, ideas, artistry, or data as one’s own, including copying another person’s work (including published and unpublished material, and material from the Internet) without appropriate referencing, presenting someone else’s opinions and theories as one’s own, or working jointly on a project, then submitting it as one’s own;
- **Assisting** - assisting another student in an act of academic dishonesty, such as taking a test or doing an assignment for someone else, changing someone’s grades or academic records, or inappropriately distributing exams to other students.

**Freedom of expression policy**

It is the policy of the district and DVC to allow and protect reasonable and legal expressions, speeches and actions according to federal and state laws and Education Code section 76120. Students have the right to exercise free expression, including the use of bulletin boards, the distribution of printed materials and the wearing of buttons, badges or other insignia. The policy excludes expression that is obscene, libelous or slanderous according to current legal standards or that incites students to create a clear and present danger or to commit unlawful acts on community college premises or damage to persons or property. Inciting students to riot, or the violation of lawful community college regulations or the substantial disruption of the orderly operation of the community college, is also prohibited.

Copies of the district and college policies are available at the Student Life Office.

**Instructional material policy**

Students enrolled in credit or non credit courses and programs may be required to provide certain instructional and other materials including, but not limited to, textbooks, tools, equipment and clothing. A “materials fee” may be charged if the instructional and other materials are used in the production of an ‘end product’ that has continuing value to the student outside the classroom setting. Excerpted from Board policy 5017.

**Matriculation rights and responsibilities**

**Student rights**

The student has the right to the following matriculation services: admissions, assessment, orientation, advisement/counseling, and follow-up services (when needed).

Diablo Valley College students are guaranteed the following rights under the State of California Matriculation Regulations:

1. **Assessment**: Students are allowed to submit scores from assessment tests taken at another California community college within the last two years in lieu of taking the assessment at DVC, if the assessment instrument is state-approved and correlation with DVC courses can be established. Title 5 Section 55530(c).

2. **Prerequisites**: A student may challenge a required course prerequisite as long as they meet the challenge conditions. (Please refer to the “prerequisite” section, page 17.)

3. **Complaints**: A student may file a complaint if he or she believes DVC has failed to make a good faith effort to develop an educational plan or provide specified services once the student has declared a specific educational goal. Title 5 Section 5525(d).
### Student rights and responsibilities

#### Student responsibilities

As part of the State of California Title 5 Matriculation Regulations, Section 55530 (d), all students are expected to participate in the matriculation process unless they are exempt (see “exemption” below) or waive the right to participate (see “waiver, appeal, and complaint procedures” below). Through the matriculation process at Diablo Valley College, students agree to the following responsibilities:

- to express at least a broad educational intent at the time of registration and state a specific educational goal upon completion of 12 units of coursework;
- to complete a first-semester individual educational plan with the assistance of a counselor prior to registering for courses. This is usually done in the orientation and advising class (Counseling 095) for new students;
- to attend and complete courses: all students are expected to attend their classes regularly, complete assigned coursework on time and complete their courses each semester. Students are expected to maintain regular progress toward their educational goal;
- to seek counseling at least once per semester and as needed to review, update, and expand their educational plans and goals. It is particularly important for the following students to seek counseling:
  - Students on academic or progress probation,
  - Students enrolled in developmental courses, (generally achieved through counselor visits to such classes during the term or can be achieved in consultation with the instructor or instructor advisor in the department);
  - Students who have not declared an educational goal. Such students are sent a letter explaining options available in identifying and updating their educational goal.

#### Exemption

Some students may choose to be exempted from assessment, orientation or counseling. Typically students seeking an exemption from matriculation services meet one of the following criteria. The student:

- has earned an associate degree or higher;
- is enrolled in a job-related course;
- has one of the following educational goals: to learn or update job skills, to maintain certificate or license, or to pursue a special personal interest;
- is enrolled in six units or less.

#### Waiver, appeal, and complaint procedures

Students who wish to request waivers or file appeals or complaints on the basis of their Title 5 Matriculation Rights must follow the sequence of the steps outlined. (Students filing other types of complaints or alleging discriminatory practices should follow the procedures listed in the Student Code of Conduct and Student Disciplinary and Due Process Procedures.)

1. **Initial review of waiver, appeal, or complaint**
   a. The student should contact the office of the dean of counseling and enrollment services and complete an “appeal or request for waiver” form or file a complaint regarding matriculation rights.
   b. The dean or designee may contact the student and schedule a meeting to discuss the problem and/or inform the student of the decision.
   c. In the event that the appeal or request for waiver is not granted, the student will be advised of his/her rights to further appeal and the correct procedures to follow.

2. **Appeal to the vice president of student services or designee.**
   a. If the initial appeal or request for waiver is not granted and the student does not accept this decision, the student may submit the initial form to the vice president of student services for further review.
   b. The vice president of student services or designee will review the appeal and may meet with the student if deemed necessary.
   c. The vice president of student services or designee will inform the student of the decision concerning the appeal or request for waiver.

#### Sexual harassment policy

It is the policy of the college to provide a work and study environment free from sexual harassment. The campus community should be aware that the college will not tolerate any conduct that constitutes sexual harassment and will take measures to ensure compliance with all applicable federal and state regulations. Formal complaints may be filed with the district, using the district unlawful discrimination form.

Sexual harassment refers to sexually oriented verbal or nonverbal behavior that is not welcome, personally offensive, debilitates morale, and interferes with the behavioral effectiveness of members of the campus community. Sexual harassment is discriminatory and unlawful.
II. Definitions

For the purpose of these rules and regulations, the following words and terms are defined as follows:

A. “Student” shall mean all persons enrolled in any courses at the colleges in the district, regardless of where courses are taught, whether they are enrolled fulltime or part-time, for credit or non credit or not-for credit or contract education, and whether or not s/he is planning to earn a degree, certificate of achievement or other certification. Persons who are enrolled in online or hybrid courses are also considered ‘students’. Persons who are not officially enrolled for a particular term, but who have been admitted to the college and enroll in courses from time to time, and have a continuing relationship with the college are considered ‘students’.

B. “Governing board” shall mean the Governing Board of the Contra Costa Community College District.

C. “District” shall mean the Contra Costa Community College District, including but not limited to its administrative staff and each of its colleges.

D. “College” shall mean a college operated and maintained by the district.

E. “Member of the college community” shall mean the district trustees, the academic, support staff, and administrative personnel of the district, the students of the district and any other person while on district or college property or at a district or college function or activity.

F. “Day” shall refer to a college instructional day unless otherwise noted.

G. “Good cause” includes, but is not limited to the following offenses:

1. continued disruptive behavior, continued willful disobedience, habitual profanity or vulgarity, or the open and persistent defiance of the authority of, or persistent abuse of, college personnel;
2. assault, battery, or any threat of force or violence upon a student or college personnel;
3. willful misconduct, which results in injury or death of a student or college personnel or which results in cutting, defacing, or other injury to any real or personal property owned by the district;
4. 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;
5. willful or persistent smoking in any area where smoking has been prohibited by law or by regulation of the governing board;
6. persistent serious misconduct where other means of correction have failed to bring about proper conduct;
7. other behavior that has grounds for disciplinary action.
III. Grounds for disciplinary action

A. Students shall conduct themselves consistent with the Student Code of Conduct while on campus or participating off campus in online or hybrid courses, or at college sponsored events or programs, including but not limited to field trips, student conferences, debate competitions, athletic contests, club-sponsored events, and international study programs, regardless of location. Students shall also conduct themselves consistent with the Student Code of Conduct in any matter related to school activity or attendance. Students shall be suspended or expelled only for good cause.

B. The following constitute misconduct and grounds for disciplinary action:

1. Acts of academic dishonesty, including, but not limited to, cheating, tampering, fabrication, plagiarism, or assisting others in an act of academic dishonesty. Cheating is defined as unauthorized copying or collaboration on a test or assignment, or the use or attempted use of unauthorized materials. Tampering is defined as altering or interfering with evaluation instruments or documents. Fabrication is defined as falsifying experimental data or results, inventing research or laboratory data or results for work not done, or falsely claiming sources not used. Plagiarism is defined as representing someone else’s words, ideas, artistry, or data as one’s own, including copying another person’s work (including published and unpublished material, and material from the Internet) without appropriate referencing, presenting someone else’s opinions and theories as one’s own, or working jointly on a project, then submitting it as one’s own. Assisting is defined as assisting another student in an act of academic dishonesty such as taking a test or doing an assignment for someone else, changing someone’s grades or academic records, or inappropriately distributing exams to other students;

2. Other forms of dishonesty, such as lying, knowingly furnishing false information, or reporting a false emergency to any college official, faculty or staff member or office or to the district;

3. Forgery, alteration, misappropriation or theft, misuse of any district or college document, record, key, electronic device, or identification, including, but not limited to, unauthorized grade changes and forged signatures on official college forms.

4. Misrepresentation of oneself or of an organization to be an agent of the district;

5. Obstruction or disruption of teaching or the district’s educational process, administrative process, disciplinary procedures, or other district functions and activities on or off district property;

6. Disruptive or abusive behavior, such as verbal harassment, habitual profanity or vulgarity, physical abuse, intimidation, hazing, or stalking of any member of the college community;

7. Vandalism, graffiti, or other willful misconduct which results in cutting, defacing, or other damages to any real or personal property owned by the district or a member of the college community;

8. Assault, battery, violence or threat of violence, or any willful misconduct which results in an injury or death of a student or district personnel or behavior that threatens the health and safety of any member of the college community;

9. Theft of district property or property in the possession of, or owned by, a member of the college community;

10. Violation of district or college policies or regulations including but not limited to those concerning the formation and registration of student organizations, the use of college facilities or the time, place, and manner of public expression or the distribution of leaflets, pamphlets, or other materials;

11. Failure to comply with the directions of the district or college officials acting in the performance of their duties and/or failure to identify oneself to these persons when requested to do so;

12. The use, sale, distribution, or possession on campus of, or presence on campus under the influence of, any controlled substances, or any poison classified as such by Schedule D section 4160 of the Business and Professions Code or other California laws, on district property or at any district-sponsored event. This regulation does not apply when the person named on the prescription possesses the drugs or narcotics or when the drugs or narcotics are permitted for and are being used in research, instruction, or analysis;

13. Possession, consumption, sale, distribution or delivery of any alcoholic beverage in college buildings or on college grounds, or at college-sponsored or supervised activities, regardless of their location, unless authorized by college officials;

14. Possession or use of explosives, dangerous chemicals, or deadly weapons on district property or at a campus function, without prior authorization of the college president;

15. Engaging in lewd, indecent, or obscene behavior on district-owned or controlled property or at a district-sponsored or supervised function;

16. Rape, date rape, sexual harassment, sexual assault, or threat of an assault upon a student or member of the college community on district property, or at a college or district-sponsored or supervised function;

17. Unauthorized use of, or misuse of district property, including, but not limited to, unauthorized possession, duplication or use of district keys and/or unauthorized entry into district property;
IV. Types of disciplinary action

The following discipline may be imposed, individually or in various combinations, on any student found to have violated the Student Code of Conduct.

Warning:
A warning is a written or oral notice to the student that continuation or repetition of certain conduct may result in further disciplinary action.

Restitution:
Restitution is reimbursement by the student for damage to, loss of or misappropriation of property. Reimbursement may take the form of appropriate service by the student to repair property or otherwise compensate for damage.

Projects and assignments:
Projects and assignments may include educational projects, service to the college, and other related discretionary assignments.

Disciplinary probation:
Probation is a status imposed for a specific period of time in which a student must demonstrate his or her conduct conforms to district standards of conduct as set forth in these regulations. Conditions may be imposed at the discretion of the district or the president’s designee. Misconduct during the probationary period or violation of any conditions of the probation may result in more serious disciplinary action, such as loss of privileges, suspension, or expulsion.

Loss of privileges:
Loss of privileges is the denial of extra-curricular activities or other special privileges for a designated period of time. Violation of any conditions or campus regulations during the period of sanction may result in far more serious disciplinary action, such as suspension or expulsion.

Removal:
Removal of a student from class by an instructor or with the assistance of police services, if necessary.

Suspension:
Suspension is a separation from the district for a designated period of time after which the student will be eligible to return. A suspension may consist of

- a period of time from one or more classes for a period up to ten (10) days of instruction;
- from one or more classes for the remainder of the school term; and
- from all classes or activities of the college for one or more terms for up to three years.

Expulsion:
Expulsion is the permanent termination of student status by the governing board 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. A student who is expelled is prohibited from participating in any college activities or programs and from entering district premises.

Revocation of degree or certification:
A degree or certificate awarded from the college may be revoked for fraud, misrepresentation, or other violation of college standards in obtaining a degree or certification, or for other serious violations committed by a student prior to graduation.

V. Reciprocity of sanctions

During a period of suspension or expulsion, a student shall not be enrolled in any other college within the district. Disciplinary actions or sanctions shall apply to the student at all district colleges.
VI. Conduct related to college
After a hearing, the president’s designee may impose an immediate suspension on a student when such action is required in order to protect property, safety, and to ensure the maintenance of order on the campus or at a campus function.

No student may be removed, suspended, or expelled unless the conduct for which the student is disciplined is related to college activity or college attendance.

VII. Record of disciplinary action
In accordance with Education Code section 76220, community college districts shall establish, maintain and destroy student records according to regulations adopted by the Board of Governors of the California Community Colleges. The president’s designee will create a record of disciplinary actions, along with relevant supporting documents and evidence. Consistent with the Family Educational Rights and Privacy Act and District Student Services Procedure 3009, this record shall be maintained as a confidential student education record and may not be released without the permission of the student, except as permitted by law and policy. The student shall have a right to inspect the record and to challenge the contents. Disciplinary records shall be retained in a manner consistent with state law, and will be destroyed following the third college year after the college year in which it originated.

In accordance with Education Code section 76234, whenever there is included in any student record information concerning any disciplinary action taken by the college or district in connection with any alleged sexual assault or physical abuse or any conduct that threatens the health and safety of the alleged victim, the alleged victim of the sexual assault or physical abuse shall be informed within three (3) days of the results of any disciplinary action by the college and the results of any appeal.

VIII. Removal by instructor
An instructor, for good cause, may remove a student from his or her class for the day of the removal and the next class meeting. (Ed. Code §§ 76032 and 76033.)

A. Procedures before the removal
1. The instructor shall notify the student of the instructor’s consideration of the removal from class and the reasons for the proposed removal.
2. The instructor may remove the student from the classroom immediately. Under normal conditions, the instructor should permit the student an opportunity to present a rebuttal to the accusation or otherwise offer relevant comment on the proposed removal. There need be no delay between the time notice is given to the student and the time of such a review.
3. The instructor shall decide whether or not to proceed with the proposed removal after hearing the student’s explanation and considering all of the information relative to the issue. There need be no delay between the time notice is given to the student and the removal.
4. The decision may be given to the student either orally or in writing.
5. The instructor’s decision is final and may not be appealed.

B. Procedures after the removal
1. Immediately following the removal, the instructor must notify the college president or president’s designee of the removal.
2. If the student removed is a minor, the college president or president’s designee shall ask the 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.
3. The instructor may request that the student meet with the college president or president’s designee, within three (3) days of removal, prior to returning to class.
4. During the period of removal, the student shall not be returned to the class without the concurrence of the instructor.

IX. Preliminary procedures for suspension by president’s designee
The following procedures shall be taken before suspension except in the event that an emergency/interim suspension is made as set forth in Section XIV.

A. Administration. The president’s designee shall administer these procedures and take appropriate action, subject to the approval of the college president and the governing board if required herein or otherwise by law.

B. Disciplinary action that may be imposed. The president’s designee may suspend or impose a lesser sanction on a student. A suspension may consist of a period of time as follows:
1. from one or more classes for a period up to ten (10) days of instruction;
2. from one or more classes for the remainder of the school term;
3. from all classes and activities of the college for one or more terms. A suspension shall not exceed three (3) years.
C. Reporting of conduct. Alleged student misconduct shall be reported to the president’s designee. The president’s designee shall be the vice president of instruction or the senior dean of student services at Contra Costa College, the dean of student services or the vice president of student services at Diablo Valley College, or the senior dean of student services at Los Medanos College. Other officials may be designated as the president’s designee, whenever necessary for the efficient operation of the district.

D. Investigation. Upon receiving a report of alleged student misconduct, the president’s designee shall initiate an investigation.

E. Notice. Before imposing discipline, the president’s designee shall give or make reasonable efforts to give the student oral or written notice of the reason for the proposed disciplinary action. If the student is a minor, the president’s designee shall also notify the parent or guardian of the investigation and charges.

F. Preliminary hearing. Within a reasonable period of time (normally within five (5) days following the delivery to the student of the notice referred to above), the president’s designee shall offer the student an opportunity to attend a meeting ("preliminary hearing") at which time the student may present a rebuttal to the accusation or otherwise offer relevant comment on the proposed discipline. There need be no delay between the time of the notice given to the student and the time of the meeting. If the student fails to arrange a preliminary hearing (or if he/she fails to appear for a preliminary hearing he/she has arranged), the decision of the president’s designee will be final and not subject to a further appeal hearing.

G. Determination after preliminary hearing. Based on the evidence presented, the president’s designee shall decide whether or not to proceed with the proposed suspension and/or to recommend expulsion after hearing the student’s explanation and considering all of the information. If the decision is to suspend for up to five (5) days, the president’s designee may inform the student of the decision and send a written confirmation to the student’s last known address within five (5) working days. The confirmation shall include a statement that the decision to impose a suspension for five (5) days or less, is not appealable. If the decision is to suspend for more than five (5) school days or to recommend expulsion, the president’s designee shall send the student a written notice via personal delivery or certified mail to the student’s last known address as set forth below.

H. Notice to the college president. The president’s designee shall report any disciplinary action imposed to the college president.

I. Notification after a suspension of more than five (5) days. If the president’s designee imposes a suspension of more than five (5) days, the president’s designee shall promptly send the student a letter of notification that is hand delivered or sent via certified mail to the student’s last known address. The notification shall include:

1. a statement of the charges, the reason for the suspension or recommended expulsion offer, and a description of facts related to the misconduct, including the evidence against the student, the date of the incident(s), time of the incident(s), and location of the offense(s);
2. a copy of the Student Code of Conduct;
3. an explanation that a student who has been suspended for more than five (5) days is entitled to appeal the decision and has a right to a further hearing ("appeal hearing"). The notification shall also state that a request for an appeal hearing shall be filed within five (5) days of the service or mailing of the notification, whichever is earlier. The written request for an appeal hearing must be submitted to the president’s designee, and must cite the specific ground(s) for the appeal (from those listed below), and provides information which substantiates the ground(s) on which the appeal is being made;
4. Grounds for appeal - A student may appeal the decision of the president’s designee on grounds that:
   a. Fair consideration was not provided to the student, (i.e., there is evidence that some aspect of the hearing was prejudicial, arbitrary, or capricious).
   b. New and significant information, not reasonably available at the time of the initial hearing, has become available.
   c. The sanction or remedy imposed is not in due proportion to the nature and seriousness of the offense. Any evidence supporting these grounds must be included in the request for an appeal hearing
5. a statement that the student has the right to be accompanied at an “appeal hearing” by an on-campus advisor of his or her choice. If the student decides to be accompanied by an advisor, the name and address of that advisor must be submitted to the president’s designee at the time the appeal is filed;
6. the president’s designee may note that he or she will also recommend expulsion;
7. the notification shall include the date, time, and location of an appeal hearing if requested by the student.

J. Student right to appeal a suspension of more than five (5) days. The student may accept a suspension in excess of five (5) days without admitting the conduct charged. In such a case, the decision of the president’s designee will be final and not subject to a further appeal hearing. Should the student not accept a suspension in excess of five (5) days, the student has a right to appeal. A suspension appeal must be filed by the student no later than five (5) business days from the date the notification letter is personally served or mailed.
Student rights and responsibilities

K. Schedule of hearing. The president's designee shall schedule an appeal hearing no later than ten (10) working days from the date of the suspension.

X. Hearing authority for appeal hearing
A. The college president will assign either an administrative hearing officer or may utilize a student discipline committee ("committee") to conduct appeal hearings at the college ("hearing authority").
B. An administrative hearing officer shall be a college official.
C. A committee shall include: one faculty member, one administrator or manager, and one student. The selection process for the committee, if any, will normally occur at the beginning of each academic school year.
   1. The academic senate will select a faculty representative and alternate(s). Vacancies will be filled by an action of the academic senate.
   2. The associated student body will select a student representative and alternate(s). Vacancies of student members shall be filled by an action of the associated student body.
   3. The college president will select the administrative or management representative and alternate(s). The administrative or management representative will serve as the committee chair.
      The student or the college staff member shall notify the committee if he or she has a conflict of interest because he or she is involved in the discipline matter and, therefore, is unable to serve as a neutral party.
   4. Alternate faculty, administrative, and student members shall be appointed to ensure that a standing committee can always be convened promptly.

XI. Appeal hearing procedures
A. The president's designee shall submit to the hearing authority, a description of the charges, notices, evidence, and a copy of the proposed decision. The president's designee shall present relevant evidence regarding the alleged misconduct. The accused student may then present any relevant evidence. Each party may call, examine, and cross-examine witnesses. Written statements, if any, shall be submitted under penalty of perjury. The hearing authority may also question witnesses. Opening and closing statements shall be limited to five (5) minutes. The president's designee shall speak first, followed by the student.
B. The hearing authority shall rule on all questions of procedure and admission of evidence.
C. Hearings need not be conducted in accordance with strict rules of evidence or formality of a court hearing.
D. The hearing authority shall consider no evidence other than that evidence received at the hearing. Hearsay evidence may be used for the purpose of supplementing or explaining other evidence, but shall not be sufficient in itself, to support a finding.
E. A student may be accompanied by an advisor of his or her choosing, at the student's request. The role of the advisor is passive in this procedure. The advisor may be present at the hearing and may counsel the student. The advisor may not address the hearing authority and shall not be permitted to participate in any way during the hearing except to offer counsel to the student. If the student decides to be accompanied by an attorney, the name and address of that attorney must be submitted to the president's designee at the time the request for hearing is filed.
F. The appeal hearing shall be closed to protect the privacy and confidentiality of everyone involved unless the student and district agree in writing to have a public hearing at least five (5) days in advance of the hearing. A closed hearing will be closed to everyone except the following:
   1. the student charged;
   2. the hearing authority;
   3. an advisor for the student charged, if so desired;
   4. the president's designee;
   5. a witness, while presenting evidence;
   6. an on-campus advisor for a witness while presenting evidence.
G. An official audiotape recording of the hearing shall be kept. The record shall be the property of the district. The student charged may listen to the tape at a mutually agreeable location at the college. An accused student may, upon request, be provided a copy at his or her own expense.

XII. Hearing authority's consideration and recommendation
Following presentation of the evidence, the hearing authority shall privately consider the evidence with all persons excluded. The hearing authority shall send a written report to the college president within five (5) working days of the termination of the hearing. The report shall contain the following information:
A. a summary of factual findings and a determination that the accused student did or did not commit the act(s) charged;
B. a finding that the student's act(s) did or did not constitute a violation of the Student Code of Conduct;
C. a recommendation for upholding or modifying the proposed discipline. The hearing authority may also recommend further investigation.
XIII. College president’s decision

A. The college president shall reach a decision after reviewing the report submitted by the hearing authority. The college president may refer the matter back to the committee or hearing officer for further clarification on details of the case, such as evidence and findings of fact. The college president may uphold the suspension, uphold the recommendation by the hearing authority, or adopt a lesser sanction, if appropriate. A written statement of the decision shall be sent via certified or registered mail to the student’s last known address within three (3) working days of the college president’s receiving the hearing authority’s recommendation.

B. The decision of the college president to suspend or impose a lesser sanction shall be final and not subject to further appeal.

C. The college president shall report a disciplinary suspension of any student to the governing board at its next regular meeting after the suspension has been imposed. A copy of the suspension determination, including the reasons for the suspension, shall be placed in the student’s permanent disciplinary record (not the transcript).

D. If the college president determines that a student should be expelled, he or she will forward that recommendation through the chancellor to the district governing board.

E. In the event that a college president is or will be unavailable for the making of a prompt decision, the college president may appoint an unbiased designee to act on the appeal.

XIV. Emergency interim suspension

A. An emergency/summary suspension is an immediate suspension imposed upon a student for good cause. (Ed. Code § 66017.)

B. Notwithstanding the foregoing, the college president or the president's designee may impose an emergency/summary suspension. It is an extraordinary measure and shall be utilized when necessary to protect lives or property and to ensure the maintenance of order pending a hearing.

C. A preliminary hearing shall be provided within ten (10) calendar days of an emergency/summary suspension. (Ed. Code § 66017) The procedures set forth in Sections IX and X shall apply to the preliminary hearing and any appeal hearing.

D. An emergency/summary suspension shall be reported to the district governing board at its next regular meeting after such suspension has been imposed. A copy of the suspension may be placed in the student’s permanent record at the discretion of the college president.

XV. Notification

The college president or president’s designee shall, upon suspension or expulsion of any student, notify the appropriate law enforcement authorities of the county or city in which the school is situated of any acts of the student that may be in violation of section 245 of the Penal Code. (Ed. Code § 76035.)

XVI. Extensions of time

Calendar restraints may be extended with the agreement of both parties.

XVII. Expulsion

The district governing board has the sole authority to expel a student. If the college president determines that a student should be expelled, he or she shall send the recommendation through the chancellor to the district governing board.

A. Within 30 instructional days of the receipt of the recommendation from the college president, and with the agreement of the chancellor, the district governing board shall conduct an appeal hearing in closed session with the accused student and the college president (or president’s designee).

1. The hearing shall be closed to protect the privacy and confidentiality of everyone involved, unless
   a. the accused student requests an open hearing, in writing, within 48 hours of being notified of the hearing, and
   b. it is determined that holding the hearing in open session would not lead to the giving out of information concerning students which would be in violation of state or federal law regarding the privacy of student records.

2. A closed hearing will be closed to everyone except the following:
   a. the student charged;
   b. an advisor/advocate for the student charged, if so desired. If the student chooses to be accompanied by an attorney, the student must notify the district in writing of his/her intent to bring an attorney at least five (5) business days prior to the hearing. Failure to notify the district will result in a waiver of the right to be accompanied by an attorney, or a one month postponement of the hearing;
   c. the college president and/or president’s designee;
   d. the district governing board;
   e. the chancellor and/or district legal advisor
   f. the student’s parent(s) or guardian, if the student is a minor;
Student rights and responsibilities

B. The accused student shall be notified in writing of the date and time of the hearing, and shall be provided with a copy of this policy. The notice shall be mailed via certified or registered mail, or served personally, if the student is a minor.

C. The hearing shall be conducted in accordance with the following procedures:

1. The president of the district governing board will serve as chair of the hearing, and will rule on all questions of procedure and admission of evidence.
2. Hearings need not be conducted in accordance with strict rules of evidence or formality of a court hearing.
3. Before commencement of the hearing, the district governing board shall review a description of the charges, notices, evidence, findings, and a copy of the proposed decision from the college-level disciplinary appeal hearing. The district governing board shall consider no evidence other than that evidence received in the hearing process.
4. The college president (or the president’s designee) shall make a brief statement to the district governing board, referring to relevant evidence regarding the alleged misconduct.
5. The accused student may then make a brief statement to the district governing board and present any relevant evidence.
6. The statements shall be limited to five (5) minutes.
7. Upon completion of these statements, the district governing board will have an opportunity to ask questions of both the student and the college president (or president’s designee).
8. The district governing board will conclude the hearing, dismiss the parties, and privately deliberate as to a decision.
9. The district governing board shall issue a statement of decision including findings of fact and a determination that the accused student did or did not commit the act(s) charged, a finding that the student’s act(s) did or did not constitute a violation of the Student Code of Conduct, and a decision as to whether the expulsion proposed by the president would be upheld or modified. The district governing board may also recommend further investigation. Pursuant to Education Code section 72122, regardless of whether the matter is heard in open or closed session, the final action of the district governing board shall be taken in open session, and the result of that action shall be a public record. The name of the student, however, shall not be released.
10. The Chancellor’s Office will send a written statement of the district governing board’s decision via certified or registered mail to the student’s last known address within three (3) working days of the hearing.
11. If the district governing board’s decision is unfavorable to the student, the student shall have the right to submit a written statement of his/her objections to the decision. This statement shall become a part of the student’s records.
12. The decision of the district governing board is final, and not subject to further appeal.
13. The hearing shall be electronically recorded. The record shall be the property of the district. The student charged may listen to the tape at a mutually agreeable location at the college. An accused student may, upon request, be provided a copy of the recording at his or her own expense.

Education Code, Sections 66017, 66300, 66301, 72122, 76030-76037, 76234

Historical annotation: adopted 03/02/04
Revised 6/17/08
Related board policy: board policy 3012
Related procedures: student services procedures 3009, 3026

Student privacy rights

The Family Educational Rights and Privacy Act (FERPA) is designed to protect students from having their records released to persons or institutions without the student’s written consent. FERPA also provides students with the right to review their education records to insure that no inaccurate or otherwise inappropriate information has been included in their file. If the student discovers that there is inaccurate information in their record, they can challenge the content of such record.

Under FERPA, post-secondary educational institutions are not required to provide parents access to the educational records of their children regardless of the student’s age since all rights have been transferred to the student by statute.

FERPA rights extend to both current and former students and are implemented as follows:

Review of records: students may request to review their records by filing a written request with the Admissions and Records Office. Within five working days the education records will be made available for inspection.

Directory information: directory information, as defined by the college, may be released without prior notice to the student unless the student provides a written notice to the Admissions and Records Office that they do not want such information to be released without their consent.

Directory information includes:
• student name,
• student participation in officially recognized activities and sports, including weight, height, and high school of graduation of athletic team members,
• degrees and awards received by students, including honors, scholarship awards, athletic awards, and dean’s recognition.

For more information about FERPA regulations go to:
Student right-to-know and campus security act
It is the policy of the district to comply with the Student Right-to-Know and Campus Security Act (Public Law 101-542) signed into law November 8, 1990.

The district shall make available the completion or graduation rates of certificate or degree seeking, full-time students entering any of the colleges, to current students, and to each prospective student upon request prior to that student’s enrolling or entering into any financial obligation, beginning July 1, 1993, and annually thereafter.

Students, faculty and staff may obtain information about campus crime and safety issues at www.4cd.edu/crpa/pd/crimereports/Forms/AllItems.aspx and www.4cd.edu/crpa/pd/righttoknow.aspx.

GRIEVANCE AND COMPLAINT PROCEDURES

Complaints about staff, managers, or faculty
Individuals who are unable to directly resolve an issue with any classified staff member or manager and wish to complain may contact that employee’s supervisor to notify them of the issue and to seek appropriate resolution.

Individuals who are unable to directly resolve an issue with any faculty member and wish to complain may contact the appropriate department chair, whose responsibility it is to listen to student inquiries, complaints and grievances about department members and matters. The department chair will investigate and attempt to resolve matters on a department level. If the faculty member is also the department chair, direct the concerns to the academic dean.

Student grievance policy (non-instructional)
The Diablo Valley College staff is dedicated to serving particular educational needs, which can be appropriately met by a college functioning in accordance with the broad purposes and regulations set forth in the education code of California. Accordingly, any student who believes there has been a violation of the regulations as stated in Title IX of the Education Act of 1972 or Section 504 of the Rehabilitation Act of 1973 may initiate a grievance (see equal opportunity policy and grievance procedures, page 15). For further information, contact the office of the vice president of student services.

GENERAL COLLEGE POLICIES

DVC is “a drug-free” campus
The DVC Student Code of Conduct prohibits the possession, consumption, sale, distribution or delivery of any alcoholic beverage in college buildings or on college grounds, or at college-sponsored or supervised activities, regardless of their location, unless authorized by college officials. The code also prohibits the use, sale, distribution, or possession on campus of, or presence on campus under the influence of, any controlled substances, as listed in Schedules I through IV of Section 202 of the Controlled Substances Act (21 U.S.C. Section 812) on district property or at any district-sponsored event. This includes student participation in field trips, athletic competition and/or any activity sponsored by the college. Any violations will be cause for disciplinary action up to and including expulsion. For additional information about the health risks associated with the use of illicit drugs and the abuse of alcohol, and the applicable legal sanctions under local, state or federal law, please visit: www.dvc.edu/alcohol-drugs. Any student who needs information about substance abuse may consult a campus counselor who can provide the student with information about available treatment resources.

Parking policy
All campus parking requires a parking decal or a daily permit, which must be displayed on the student’s vehicle. Parking permits are required 6 a.m. Monday through 5 p.m. Friday. Students may park only in student parking lots. Parking is available on a first-come, first-served basis, and having a permit does not guarantee that a student will find a parking space. Separate summer permits are also required. Parking permits are not required at the San Ramon Campus. For more information, contact police services, or visit www.4cd.edu/crpa/pd.

Smoking policy
In recognizing the serious health risks associated with smoking, wishing to discourage both students and staff from becoming smokers, and recognizing the rights of non-smokers to a reasonably smoke-free environment, the following policy applies:

At the Pleasant Hill campus, smoking is allowed only in the parking lots. At the San Ramon Campus, smoking is allowed only in the student parking lots. Restrictions at other educational sites are established by those sites and by state and local law.

Adherence to the restrictions relies on the initiative of non-smokers to politely request that smokers comply and on the courtesy of smokers to acknowledge the restrictions and comply. Willful or persistent smoking in any area where smoking has been prohibited by law or by regulation of the Governing Board is a violation of the Student Code of Conduct and is punishable by disciplinary action. State law also prohibits smoking within 20 feet of all doorways and windows. Smoking generally means inhaling, exhaling, burning or carrying any lighted cigar, cigarette or pipe.
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer information</td>
<td>45</td>
</tr>
<tr>
<td>Transfer to the California State University (CSU)</td>
<td>45</td>
</tr>
<tr>
<td>Intersegmental General Education Transfer Curriculum (IGETC)</td>
<td>46</td>
</tr>
<tr>
<td>Transfer to the University of California (UC)</td>
<td>46</td>
</tr>
<tr>
<td>Transfer to independent (private) and out-of-state colleges and universities</td>
<td>47</td>
</tr>
<tr>
<td>DVC associate degrees</td>
<td>47</td>
</tr>
<tr>
<td>Associate degree requirements for students entering fall 17</td>
<td>48</td>
</tr>
<tr>
<td>Option 1 – Diablo Valley College general education</td>
<td>50</td>
</tr>
<tr>
<td>Option 2 – IGETC – Intersegmental General Education Transfer Curriculum</td>
<td>52</td>
</tr>
<tr>
<td>Option 3 – CSU GE – California State University general education</td>
<td>54</td>
</tr>
<tr>
<td>DVC career/technical programs</td>
<td>56</td>
</tr>
<tr>
<td>DVC certificate programs and associate degrees</td>
<td>57</td>
</tr>
</tbody>
</table>
TRANSFER INFORMATION

Many of our students transfer to a four-year college or university after completing lower division courses at DVC. DVC has consistently been among the community colleges that transfers the most students to the University of California and to the California State University systems.

The key to our students’ success is that they understand which transferable courses are required:

- for admission to their major;
- for general education at their chosen four-year college.

The requirements to transfer can be complex and necessitate that students seek strong advising to be assured that the courses in which they enroll meet all their transfer college’s requirements. Students are strongly encouraged to work with our counselors to plan their class schedules. This planning ensures that students complete needed courses at DVC in a timely manner and can reduce the time needed at the four-year college to attain a bachelor’s degree.

Each four-year institution has its own basic pattern of lower-division requirements regarding both general education and specific majors. CSU and UC applicants must also meet admission, major, prerequisite, and transferable unit requirements. These requirements vary from college to college and often change from year to year. Therefore, in addition to using counseling services, students are also encouraged to take advantage of information available in the Career, Employment and Transfer Center, counseling, on college and university websites, in print materials, from college representatives, and in our workshops.

Transfer to the California State University (CSU)

To transfer as a junior to CSU, students must complete all of the following:

- at least 60 CSU transferable units with a 2.0 grade point average;
- at least 30 of those units must be GE courses from the IGETC or CSU GE requirements (listed as General Education Options 2 and 3 at the end of this chapter of this catalog);
- courses in Oral Communication, Written Communication, Critical Thinking and Mathematics/Quantitative Reasoning must all be completed with grades of “C” or higher. (Areas A and B4 from the CSU GE requirements or Areas 1 and 2 from IGETC).

CSU transferable courses

CSU transferable courses are designated in the course descriptions of this catalog. This information is also available at www.assist.org.

Impacted majors

The term impacted means that the program usually attracts many more applicants than it can accept. Consequently, there are special requirements and selection procedures for admission. Sometimes entire campuses such as Cal Poly San Luis Obispo and San Diego State University are impacted and all majors there require more than the minimum requirements for admission.

Impacted majors at individual CSU campuses can vary from year to year. Some examples of impacted majors are business administration and nursing.
Students should refer to the specific CSU campus web site or www.assist.org or www.csumentor.edu for current information regarding impacted majors. Students are encouraged to meet with a counselor to determine if the major they are considering is impacted and what additional requirements are necessary to transfer.

**CSU General education requirements (CSU GE)**
Completion of the pattern of courses listed as General Education Option 3 on page 54 ensures that students will have completed all of their lower division general education courses toward their bachelor’s degree at CSU. After a student has completed this pattern, he or she must request certification of its completion. With this certification, students will be responsible only for an additional nine upper division semester units in general education after transfer.

The current list of courses approved for meeting CSU GE is available in the DVC Counseling Center or at www.assist.org. See page 54 for more information about the pattern of courses listed as General Education Option 3.

Students may choose to complete the IGETC pattern of courses rather than CSU GE for CSU. This will have the same benefit as certification in CSU GE.

Students must submit a CSU GE or IGETC certification request form to the DVC Admissions and Records Office. Once the Admissions and Records Office evaluates the student transcript and certifies completion of requirements, students can request the CSU GE certification be sent to the CSU institution that they will be attending.

**Intersegmental General Education Transfer Curriculum (IGETC)**
The IGETC is a general education pattern that community college transfer students can use to fulfill lower-division general education requirements for the CSU or many colleges in the UC system without the need to take additional lower-division general education courses after transfer. Students who have attended a CSU, UC, independent or out-of-state college or university should consult with a counselor to determine if the use of IGETC is appropriate to reach their goal.

IGETC may not be the right choice for all students planning to transfer. The IGETC is just one way to fulfill the lower-division general education requirements of the UC or CSU.

It is not recommended for certain majors and some schools or colleges within UC do not accept IGETC. Students pursuing majors that require extensive lower-division major preparation may not find the IGETC option to be advantageous and may be better served by taking courses that fulfill the general education requirements of the UC or CSU college to which they plan to transfer. The IGETC will probably be most useful for students who want to keep their options open before making a final decision about transferring to a particular CSU or UC campus or a particular major. It is recommended that the entire IGETC pattern be completed prior to transfer. If a student does not complete all the general education requirements of the IGETC with a grade of “C” or higher before transferring, he/she will be subject to the regulations regarding general education requirements of the school or college of the campus to which he/she has been admitted.

The current list of courses approved for meeting IGETC is available in the DVC Counseling Center or at www.assist.org. Please see page 53 for information about the pattern of courses listed as General Education Option 2.

Students must submit an IGETC certification request form to the DVC Admissions and Records Office. Once the Admissions and Records Office evaluates the student transcript and certifies completion of requirements, students can request the IGETC certification be sent to the four-year institution that they will be attending.

**Transfer to the University of California (UC)**
To transfer as a junior to UC students must complete 60 semester units of UC-transferable college credit with a grade point average of at least 2.4 (2.8 for non-residents) including:

- two UC-transferable college courses (three semester units each) in English composition; and
- one UC-transferable college course (three semester units) in mathematical concepts and quantitative reasoning; and
- four UC-transferable college courses (three semester units each) chosen from at least two of the following subject areas: the arts and humanities, the social and behavioral sciences, and the physical and biological sciences.

All of the above courses must be completed with grades of “C” or higher.

Course requirements vary from one UC campus to the next. Therefore, students should work with a counselor to formulate a strategy for completing a particular campus’s admissions requirements, major requirements, and general education requirements.
Letter graded and Pass (P) units
No more than 14 of the UC-transferable units may be graded “P”. All courses required in a major must be taken for a letter grade. Contact a counselor for complete information.

UC transferable courses
UC-transferable courses are designated in the course descriptions of this catalog. This information is also available at www.assist.org.

Selection for admission to UC
Many campuses of the UC receive many more applicants to a particular major or program than it can accept. Consequently, there may be certain course requirements, special selection procedures and a higher grade point average requirement than the minimum 2.4 GPA admission requirement for UC transfers (2.8 GPA for non-residents). Students interested in transferring to UC are urged to consult with a counselor as soon as possible in order to determine the current requirements for the major to which they plan to apply. Knowledge of these requirements will maximize a student’s chances of being selected by the UC campus of their choice.

Selective majors at the UC campuses vary from year to year. Refer to the specific campus website for current information on impacted majors. Information is also available at www.assist.org.

UC special admissions programs - Transfer agreement guarantee (TAG) agreement
The following UC campuses offer agreements that guarantee DVC students admission as transfer students provided they complete certain courses with a designated grade point average: Davis, Irvine, Merced, Riverside, Santa Barbara and Santa Cruz. The admission agreements offered by these campuses vary according to their requirements. Contact a counselor for complete information.

Transfer to independent (private) and out-of-state colleges and universities
Each year many DVC students go on to pursue their fields of interest and earn their degrees at private four-year institutions. Admission requirements and general education requirements vary from college to college. DVC has articulation agreements with a limited number of independent colleges and universities in the area and out-of-state. These can be obtained through the DVC Counseling Center. Some independent and out-of-state colleges and universities will accept IGETC and CSU GE to fulfill lower-division general education requirements. To make transfer to an independent or out of-state college or university as smooth as possible, students are advised to contact the school directly early in their academic career to inquire about their admissions and general education requirements.

DVC ASSOCIATE DEGREES
DVC offers associate degrees in arts and science. These degrees are comprised of specific general education, major requirements and elective opportunities.

Goals of DVC’s associate degrees
The goals of DVC’s associate degrees are:

- the development of college-level skills;
- the acquisition of basic principles in the major disciplines and methods of discovery and problem solving;
- the formation of insights from several disciplines in order to make better-informed decisions;
- an appreciation of our multicultural heritage;
- an understanding of the values we hold so that we may use them to examine and guide our life choices.

Associate degree general information
The completion of the associate in arts or science degree provides students with strong academic skills and a broad, in-depth, general education. Students may explore their interests by selecting from different majors and electives as well as completing required general education courses. Associate degrees are college and state approved and accredited programs.

Non degree applicable courses
Units from courses numbered below 100 cannot be applied to the degree. Non degree applicable course grades will not be included in calculating GPA for a degree.

Note: Only one of ENGL-116, 117, 118 or ESL-117A may be applied to the associate degree. ENGL-120A may not be applied to the associate degree.

Meet with a counselor
It is very important to consult with a counselor before selecting courses. Counselors help students discover and examine all their available choices including determining whether there are courses whose requirements the student may have already met and initiating appropriate procedures to transfer credit or substitute coursework.

Graduation
It is the student’s responsibility to file a petition for the associate degree by the deadline during the term in which he/she plans to complete the requirements. Diplomas are mailed at the end of each term. Please allow for 6-8 weeks processing time. Graduation ceremonies are held annually at the end of spring term.
Catalog rights and continuous enrollment for degrees and certificates
The college catalog specifies the requirements to earn a degree or certificate. The requirements in a specific academic year's catalog are the student's contract (catalog rights) with the college and that catalog defines what the student must complete to earn a degree or certificate.

Students may follow the catalog requirements that were in effect for the academic year when their attendance began at Diablo Valley College or follow the catalog requirements in effect during subsequent years of attendance provided that continuous enrollment has been maintained. Effective fall 2009, continuous enrollment is defined as enrollment in at least one course at Diablo Valley College, Los Medanos College or Contra Costa College in an academic year (fall, spring, summer). The student must receive a grade or notation on their transcript of “A,” “B,” “C,” “D,” “F,” “P,” “NP,” “I” or “W” for the course. This continuous enrollment policy applies to students who are new, returning or continuing. Students completing a degree may choose a general education pattern under one academic year and major program requirements from a different academic year. The academic year(s) chosen must be declared on the application for the degree.

Former students who completed their requirements prior to leaving but failed to petition for degree or certificate may petition and choose the catalog requirements in effect at the time of petition or those in effect at the time of their last enrollment. Under special circumstances, exceptions to this catalog rights policy may be considered through a petition process initiated through the Admissions and Records Office.

The college reserves the right to change catalog rights or program requirements based upon legal mandate and accreditation standards at any time. Catalog rights do not apply to CSU GE or IGETC certification. Students must follow the CSU GE or IGETC pattern in effect when they petition for certification. Courses used for certification must be on the approved list at the time they are completed.

ASSOCIATE DEGREE REQUIREMENTS FOR STUDENTS ENTERING FALL 2017
To be awarded the associate degree students must meet the following requirements:

1. Degree requirements
   A student is eligible for graduation with the associate in arts or associate in science degree after the satisfactory completion of a minimum of 60 units of degree applicable coursework with a grade point average of 2.0 (C) or higher.* At least 12 units of degree applicable coursework must be earned at DVC.

   *Associate degrees for transfer require completion of 60 CSU transferable units.

2. Major/area of emphasis requirements
   This requirement is satisfied by completing the courses listed as the major under various disciplines in the college catalog.

3. General education requirements
   Students may complete one of the three different general education patterns. General education Option 1 (DVC GE) is recommended for students who do not intend to transfer. Some courses may apply toward Option 2 and Option 3. Students intending to transfer to four-year institutions are advised to select Option 2 (IGETC) or Option 3 (CSU GE)

   Option 1 – Diablo Valley College general education; 18 units of general education courses from areas I-IV.
   Option 2 – IGETC – Intersegmental General Education Transfer Curriculum
   Option 3 – CSU GE – California State University General Education

Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units.

To view the most current list of Diablo Valley College associate degrees for transfer and to find out which CSU campuses accept each degree, please go to www sb1440.org. Current and prospective community college students are encouraged to meet with a counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.
Option 1 DVC general education philosophy statement/general education program learning outcomes

A. English composition
In English composition, students will be able to compose coherent essays that demonstrate their ability to advance their own ideas and engage meaningfully with other sources. Through reading and critical thinking, students will learn to express their own opinions and use a variety of rhetorical strategies.

Students will be able to:

• write an essay of several paragraphs developing a central idea;
• use written and spoken language to communicate effectively;
• apply principles of critical thinking to reading and writing;
• identify the primary elements of an argument and determine their validity;
• discuss and analyze how meaning is created in works of fiction and non-fiction.

B. Communications and analytical thinking
Students will appreciate and use principles of communication and analytical thinking in whatever symbol system the student uses, such as mathematics, computer science, or written or spoken language.

Students will be able to:

• demonstrate logical and analytical thinking;
• express concepts clearly and precisely;
• critically evaluate the expression of concepts in a variety of forms

C. Mathematics comprehension
Students will understand mathematical abstraction and the use of mathematical symbols. They will be able to apply principles of mathematics leading toward an understanding and appreciation of the power and relevance of mathematics.

Students will be able to:

• recognize and examine mathematical relationships in the form of equations, graphs, and tables;
• apply mathematical methods to solve quantitative problems in the sciences, in their vocations, and in their daily lives as citizens and consumers;
• use appropriate technology to help solve mathematical problems.

II. Natural sciences
Students will recognize humans as seekers of fact and makers of meaning through abstraction and generalization.

By studying disciplines within biological and physical sciences, students will be able to:

• explain the basic concepts of biological and/or physical sciences;
• interpret and criticize information from a variety of sources to distinguish between opinions based upon preconception and controlled scientific experiments;
• solve problems in a wide range of contexts utilizing scientific methods.

III. Arts and humanities
Students will be able to evaluate the human experience as it is reflected and shaped by the arts and humanities.

Students will be able to:

• utilize an integrated and analytical approach to the study of art, humanities, languages, theater, film, literature and music within historical, political, and sociological contexts;
• critically examine the relationships between the ways people from different times and cultures live and the arts forms they create;
• evaluate aesthetic and cultural ideas and ethical standards by engaging the arts and humanities.

IV. Social and behavioral sciences
Students will better understand the cultural and social organizations in which they live as well as those of other human societies. Students will also be able to employ the scientific methodologies through which society and the greater world are examined and understood.

By studying disciplines within social and behavioral sciences, students will be able to:

• demonstrate an understanding of the complexity of social and behavioral phenomena;
• evaluate the scope and functions of social institutions;
• interpret and critically analyze information from a variety of sources to distinguish between generalizations based on preconceptions and those based on research.
DVC general education requirements - option 1

The 2017-18 requirements were not available at time of catalog publication, please see a counselor for most current information.

DVC GE
Option 1 for DVC AA/AS GE

Diablo Valley College
General Education Requirements - Option 1
Effective Fall 2016 through Summer 2017

NOTE: Subject to change. See a counselor for more information.

Associate In Arts / Associate In Science

The requirements listed on this worksheet are those in effect for 2016-2017. A student remaining in continuous enrollment at Diablo Valley College, Contra Costa College, or Los Medanos College may elect to meet the graduation requirements in effect at the college from which the student will graduate either at the time the student first enrolled or any subsequent year of continuous enrollment. Continuous enrollment is maintained when a student receives an A, B, C, D, F, P, NP, I or W at DVC, CCC, or LMC in at least one class in each academic year (fall or spring or summer).

Basic Degree Requirements:

• 18 units of general education courses from Areas I through IV.
• Satisfactory completion of a minimum of sixty (60) units of degree-applicable coursework. Courses numbered below 100 are non-degree applicable.
  English 116, 117, 118; English as a Second Language 117A combined: maximum credit, one course.
• Overall grade point average of 2.0 (C) or higher in degree-applicable coursework. Note: Some majors may require a higher grade point average in major coursework. See catalog.
• At least 12 units of degree-applicable coursework earned at Diablo Valley College.
• Major requirements as listed in the catalog or addendum.

See a counselor or DVC catalog page 20 for use of AP, CLEP or IB exams to meet these requirements.

I. LANGUAGE AND RATIONALITY

A. English Composition

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 122 with a grade of &quot;C&quot; or higher</td>
<td>3</td>
</tr>
</tbody>
</table>

B. Communications and Analytical Thinking

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete one course:</td>
<td>3-5</td>
</tr>
<tr>
<td>Business 240, 250, 255</td>
<td></td>
</tr>
<tr>
<td>Communication Studies 121, 123</td>
<td></td>
</tr>
<tr>
<td>Computer Science 121, 123, 165, 255</td>
<td></td>
</tr>
<tr>
<td>English 123, 126</td>
<td></td>
</tr>
<tr>
<td>History 122</td>
<td></td>
</tr>
</tbody>
</table>

Math courses used to fulfill this requirement also meet course requirement in Area I.C. Mathematics Comprehension.

C. Mathematics Comprehension

1. Complete one of the following courses with a grade "C" or higher, or transfer credit for an equivalent course from another accredited college or university.
<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business 240</td>
<td></td>
</tr>
<tr>
<td>Engineering Technology 111</td>
<td></td>
</tr>
</tbody>
</table>

OR

2. Satisfy one of the following:
   • Receive a "C" grade or higher in both semesters of a high school Algebra II course.
   • Score at least 520 on the SAT Math test.
   • Score 24 or above on the math section of the ACT test.
II. NATURAL SCIENCES
   Complete one course:
   - Anthropology 115, 140
   - Astronomy 110, 120, 128
   - Biological Science 101, 102, 107, 115, 117, 119, 120, 126, 130, 131, 139, 140, 146, 161, 162, 170, 171
   - Chemistry 106, 108, 109, 120, 121, 226, 227
   - Geography 120, 140
   - Geology 120, 121, 125
   - Oceanography 101, 102
   - Physical Science 112
   - Physics 110, 113, 120, 121, 129, 130, 230, 231

III. ARTS AND HUMANITIES
   Complete one course:
   - Arabic 121
   - Architecture 156, 157, 158, 160, 165
   - Art 151
   - Art Digital Media 214
   - Art History 193, 195, 196, 197, 199
   - Chinese 121, 220, 221
   - Dance 201
   - Drama 139, 140, 141, 142, 180, 181
   - English 150, 151, 152, 153, 154, 162, 163, 164, 166, 167, 168, 170, 172, 173, 175, 176, 177, 178, 180, 190, 252, 253, 262, 263, 272, 273
   - Film, Television and Electronic Media 200, 205, 210, 260, 280, 281, 282, 283
   - French 121, 220, 221, 230, 231
   - German 121, 220, 221, 230, 231
   - History 120, 121, 124, 125, 126, 127, 128, 129, 135, 136, 140, 141, 142, 150, 151, 170, 171, 180, 181
   - Italian 121, 220, 221, 230, 231
   - Japanese 121, 220, 221
   - Music 110, 112, 114, 115, 116, 117, 118
   - Persian 121
   - Philosophy 120, 122, 140, 141, 160, 220, 224, 225
   - Russian 121, 220, 221
   - Sign Language 282, 283
   - Spanish 121, 220, 221, 230, 231

IV. SOCIAL AND BEHAVIORAL SCIENCES
   Complete one course:
   - Administration of Justice 120
   - Anthropology 120, 125, 130, 135
   - Communication Studies 125, 180
   - Early Childhood Education 124
   - Economics 101, 200, 220, 221
   - Engineering 130, 131
   - Film, Television and Electronic Media 240
   - Geography 130, 135
   - Health Science 127, 130, 135, 140, 164, 170
   - History 120, 121, 124, 125, 126, 127, 128, 129, 135, 136, 140, 141, 142, 150, 151, 170, 171, 180, 181
   - Political Science 120, 121, 127, 151, 220, 240, 250
   - Psychology 101, 122, 130, 140, 141, 160, 190, 200, 220, 225, 230, 240
   - Social Science 110, 111, 120, 123, 220
   - Sociology 120, 121, 123, 124, 125, 131, 135

General Education

Additional courses may be necessary to complete the minimum of 18 units required for the Associate degree. Additional courses to be selected from Areas IB through IV.

Major / Area of Emphasis

This requirement is satisfied by completing the courses listed as the major/area of emphasis under various disciplines in the DVC catalog.

Electives

Elective courses may be necessary to complete the minimum of 60 degree-applicable units required for the Associate degree. Any degree-applicable course may be selected as an elective.

Total units required for AA/AS degree 60

Full completion of IGETC (Option 2) or CSU GE (Option 3) may also be used in place of this pattern of courses.
IGETC for CSU or UC

Option 2 for DVC AA/AS GE

Diablo Valley College
Intersegmental General Education Transfer Curriculum
Effective Fall 2016 through Summer 2017

NOTE: Subject to change. See a counselor for more information.

Upon completion of this pattern of courses, DVC will certify that a student’s lower division general education requirements are completed for any of the 23 CSU or 9 UC campuses. Certification is not automatic; you must request certification with your final transcript at the DVC Admissions Office. Courses used for IGETC must be completed with a minimum grade of ‘C’ or higher.

To transfer as a junior, you must complete at least 60 CSU or UC -transferable units. IGETC is not recommended for all majors. See www.assist.org or meet with a counselor.

You may also view IGETC FAQ’s at www.dvc.edu/counseling.

See a counselor or DVC catalog for use of AP and IB exams to meet these requirements.

AREA 1 - ENGLISH COMMUNICATION

CSU - 3 courses required, 1 each from Group A, B, and C.

UC - 2 courses required, 1 each from Group A and B.

A. English Composition - 1 course, 3 semester units

- English 122

B. Critical Thinking - English Composition - 1 course, 3 semester units

- Communication Studies 121+
- English 123, 126
- History 122
- Philosophy 130
- Psychology 145
- Sociology 122

C. Oral Communication - CSU REQUIREMENT ONLY (not required by UC) - 1 course, 3 semester units

- Communication Studies 120, 123, 130

AREA 2 - MATHEMATICAL CONCEPTS AND QUANTITATIVE REASONING

- 1 course, 3 semester units

- Business 240+
- Math 124, 135+, 135SP+, 142+, 144+, 182+, 183+, 191+, 192+, 193+, 194, 195, 292, 294

AREA 3 - ARTS AND HUMANITIES

- One Arts course, one Humanities course, and one course from either Arts or Humanities, 9 semester units.

A. Arts Courses

- Architecture 156, 157, 158
- Art 151
- Art Digital Media 214
- Art History 193, 195, 196, 197, 199
- Dance 201
- Drama 139, 140, 141, 142, 180, 181
- Film, Television and Electronic Media 200, 205+, 210, 280, 281+, 282, 283
- Music 110, 112, 114, 115, 116, 117, 118

B. Humanities Courses

- Arabic 121
- Architecture 160, 165
- Chinese 121, 220, 221
- English 160, 151, 152+, 153, 154, 162, 163, 164, 166, 167, 168, 170, 172, 173, 175, 176, 177, 178, 180, 190, 252, 259, 262, 263, 272, 273
- Film, Television and Electronic Media 260
- French 121, 220, 221, 230, 231
- German 121, 220, 221, 230, 231
- History 120, 121, 124, 125, 126, 127, 128, 129, 135, 136, 140, 141, 142, 150, 151, 170, 171, 180, 181
- Italian 121, 220, 221, 230, 231
- Japanese 121, 220, 221
- Persian 121
- Philosophy 120, 122, 140, 141, 160, 220, 224, 225
- Russian 121, 220, 221
- Sign Language 282, 283
- Spanish 121, 220, 221, 230, 231

AREA 4 - SOCIAL AND BEHAVIORAL SCIENCES

- At least 3 courses, 9 semester units. Courses must be chosen from at least two disciplines.

- Administration of Justice 120
- Anthropology 120, 125, 130, 135
- Communication Studies 125, 180
- Early Childhood Education 124
- Economics 101+, 200+, 220, 221
- Engineering 130, 131
- Film, Television and Electronic Media 240
- Geography 130, 135
- Health Science 127+, 130, 135, 140, 164, 170+
- History 120, 121, 124, 125, 126, 127, 128, 129, 135, 136, 140, 141, 142, 150, 151, 170, 171, 180, 181
- Journalism 110
- Political Science 120, 121, 127, 151, 220, 240, 250
- Psychology 101, 122, 130, 140, 141, 160, 190, 200, 220, 225, 230, 240
- Social Science 110, 111, 120, 123, 220
- Sociology 120, 121, 123, 124, 125, 131, 135
AREA 5 – PHYSICAL AND BIOLOGICAL SCIENCES - At least 2 courses, one Physical Science course and one Biological Science course; at least one of the courses must include a laboratory; 7-9 semester units. Laborato ry must be taken with a matching lecture course.

A. Physical Science Courses - Courses with a laboratory component are underlined.

- Astronomy 110+ (add Astronomy 130 for lab), 120+ (add Astronomy 130 for lab), 126+
- Chemistry 106+, 108+, 109+, 120, 171, 226, 227
- Geography 120, 121, 140, 141, 130+, 230+, 231+

B. Biological Science Courses - Courses with a laboratory component are underlined.

- Anthropology 115 (no lab), 140 (add Anthropology 141L for lab)
- Biological Science 101+, 102+, 107, 117+, 119+, 120+, 126, 130, 131, 132+, 140+, 146+, 161+, 162+, 170+, 171+

C. Laboratory must be taken with matching lecture course.

AREA 6 – LANGUAGE OTHER THAN ENGLISH - UC REQUIREMENT ONLY (not required by CSU)

Students shall demonstrate proficiency in a language other than English by completing ONE of the following:

1. Satisfactory completion of two years of high school coursework (United States high school or high school in country where the language of instruction is English) in a language other than English, with a grade of “C” or better in each course. The two years must be in the same language. Two years of high school study in American Sign Language (ASL). (Please submit official transcript to DVC Admissions Office).

2. One of the following: Arabic 120; Chinese 120; French 120; German 120; Italian 120; Japanese 120; Persian 120; Russian 120; Sign Language 281; Spanish 120. (This requirement can be validated by more advanced course.)

3. Satisfactory score in the SAT II: Subject Test in languages other than English. (See counselor for required scores.)

4. Score of 3 or higher on the AP exams in languages other than English.

5. Score of 5 or higher on the International Baccalaureate Higher Level Exams in languages other than English.

6. Language other than English "O" level exam with a grade of "C" or higher.

7. Language other than English International "A" Level exam with a grade of "C" or higher.

8. Satisfactory completion of a proficiency test administered by a community college, university or other college in a language other than English.

9. Satisfactory completion with "C" grades or higher, of two years of formal schooling at the sixth grade level or higher in an institution where the language of instruction is not English. Appropriate documentation of attendance at the secondary school must be presented to DVC Admissions Office.

CSU Graduation Requirement

U.S. HISTORY, CONSTITUTION AND AMERICAN IDEALS REQUIREMENT: GRADUATION REQUIREMENT ONLY. The following pair of classes fulfill the US History, Constitution, and American institutions (AH&I) requirement. This CSU graduation requirement may be fulfilled, but is not required, prior to transfer. Courses used to fulfill this requirement also meet course requirement in IGETC Areas 3 or 4. See a counselor or DVC catalog for the use of AP and CLEP examinations to meet this requirement.

One of the following pairs:

<table>
<thead>
<tr>
<th>Hist 120 AND Hist 121 OR 124 OR 128 OR 171 OR Polsc 121 OR 151 OR Socscc 111 OR 220</th>
<th>Hist 171 AND Hist 120 OR 127 OR 170 OR Polsc 121 OR Socscc 111 OR 120 OR 220</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Polsc 121 AND Hist 120 OR 121 OR 125 OR 126 OR 127 OR 128 OR 129 OR 170 OR 171 OR Socscc 120</td>
</tr>
<tr>
<td>Hist 124 AND Hist 120 OR 127 OR Socscc 120</td>
<td>Polsc 151 AND Hist 120 OR 127 OR Socscc 120</td>
</tr>
<tr>
<td>Hist 125 AND Polsc 121 OR Socscc 111 OR 220</td>
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</tr>
<tr>
<td>Hist 128 AND Hist 120 OR 127 OR Polsc 121 OR Socscc 111 OR 120 OR 220</td>
<td>Hist 170 AND Hist 171 OR Polsc 121 OR Socscc 111 OR 220</td>
</tr>
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</table>

Full completion of this pattern will also fulfill the general education requirements for the DVC AA/AS degree (Option 2). + UC credit limits may apply – please see a counselor.
### CSU GE

**Option 3 for DVC AA/AS GE**

Diablo Valley College  
California State University General Education (GE) Breadth Requirements  
Effective Fall 2016 through Summer 2017

**NOTE:** Subject to change. See a counselor for more information.

Upon completion of this pattern of courses, DVC will certify that a student's lower division general education requirements are completed for any of the 23 campuses within the CSU system. Certification is not automatic; you must request certification with your final transcript at the DVC Admissions Office. See www.assist.org for information specific to your major.

**TO TRANSFER AS A JUNIOR TO CSU YOU MUST:**

- Complete at least 60 CSU-transferable units with a "C" average (2.0).
- Complete at least 30 of the 39 units from the GE courses listed below, including one course from each of the following areas: A1, A2, A3 and B4, with grades of "C" or higher.

**NOTE:** A course may be listed in more than one area, but may be used to satisfy only one subject requirement except U.S. History, Constitution and American Ideals. See a counselor or DVC catalog for use of AP, CLEP or IB exams to meet these requirements.

### A. English Language Communication and Critical Thinking - 9 units required.

- Students will need a grade of "C" or higher for certification, CSU admission and/or graduation.

#### A1 Oral Communication

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#### A2 Written Communication

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#### A3 Critical Thinking (one course)

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### B. Scientific Inquiry and Quantitative Reasoning (including Mathematics) - at least 9 units required.

- One Physical Science course and one Life Science course, at least one of the courses must include a laboratory. Courses with a lab component are underlined. At least one mathematics course also required.

#### B1 Physical Science

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#### B2 Life Science

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#### B3 Laboratory Activity

One course underlined in Area B1 or B2 with lecture course as stated above.

#### B4 Mathematics/Quantitative Reasoning (Grade of "C" or higher required for certification.)

- Business 240
- Mathematics 121, 124, 125, 135SP, 142, 144, 181, 182, 183, 191, 192, 193, 194, 195, 292, 294

### C. Arts and Humanities - at least 9 units required.

- One Arts course, one Humanities course and one course from either Arts or Humanities.

#### C1 Arts (Art, Dance, Film, Music, Theater)

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#### C2 Humanities: (Literature, Philosophy, Foreign Language)

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The 2017-18 requirements were not available at time of catalog publication, please see a counselor for most current information.
### CSU GE – California State University general education-option 3

#### D. SOCIAL SCIENCES – at least 9 units required with courses in at least 2 disciplines (categories).

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<thead>
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<th>Administration of Justice</th>
<th>History 120, 121, 124, 125, 126, 127, 128, 129, 135, 136, 140, 141, 142</th>
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<tr>
<td>Anthropology 120, 125, 130, 135</td>
<td>Economics 101, 120, 121, 127, 151, 220, 240, 250</td>
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<td>Film, Television and Electronic Media 240</td>
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<td>Engineering 130, 131</td>
<td>Geography 130, 135</td>
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<td>Film, Television and Electronic Media 240</td>
<td>Health Science 127, 130, 135, 140, 164, 170</td>
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<td>Geography 130, 135</td>
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<td>Sociology 120, 121, 123, 124, 125, 131, 135</td>
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<th>Engineering 130, 131</th>
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<tr>
<td>Engineering 130, 131</td>
<td>Sociology 120, 121, 123, 124, 125, 131, 135</td>
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</table>

#### E. LIFELONG LEARNING AND SELF-DEVELOPMENT – at least 3 units required, not all in physical activity. Military service may be used to fulfill this requirement. DD-214 must be submitted to the DVC Admissions and Records Office.

<table>
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<tr>
<th>Administration of Justice 120, 139</th>
<th>Administration of Justice 120, 139</th>
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#### U.S. HISTORY, CONSTITUTION AND AMERICAN IDEALS REQUIREMENT:

**GRADUATION REQUIREMENT ONLY.** This CSU graduation requirement may be fulfilled, but is not required, prior to transfer. Courses used to fulfill this requirement also meet course requirement in CSU GE Areas C or D. See a counselor or DVC catalog for use of AP and CLEP examinations to meet this requirement.

**One of the following pairs:**

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<tr>
<th>Hist 120 AND Hist 121 OR 124 OR 128 OR 171 OR Polsc 121 OR 151 OR Socsc 111 OR 120 OR 220</th>
<th>Hist 120 AND Hist 121 OR 124 OR 128 OR 171 OR Polsc 121 OR 151 OR Socsc 111 OR 120 OR 220</th>
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</table>

Full completion of this pattern will also fulfill the general education requirements for the DVC AA/AS degree (Option 3).
DVC CAREER/TECHNICAL PROGRAMS

DVC offers more than 30 career/technical programs and over 75 certificates and degrees that provide students with the educational background and training they need to achieve their career goals. By completing a career/technical program, students demonstrate to employers that they have acquired appropriate and up-to-date skills. Changing technologies affect the way we live and perform our jobs. Staying on top of these changes is an important priority. DVC’s excellent reputation is a distinct advantage to our students as they compete in today’s demanding job market.

Career/technical certificate and degree programs vary in length; most certificate programs require less than two years of full-time study to complete and many programs may be completed on a part-time basis. DVC offers two types of certificates: certificates of achievement and certificates of accomplishment. In many cases, courses completed as part of a certificate program can be applied to a degree program. Only certificates of achievement and associate degrees are recorded on the student’s official transcript.

Students who successfully complete their certificate or degree coursework must apply to the Admissions and Records Office to receive their award. To qualify for a certificate, students must complete at least twenty-five percent of the required courses at DVC. Students must also maintain a grade point average of “C” (2.0) or higher in the certificate’s required courses. Some certificates require a higher grade point average in required courses. See specific program description for details.

Students who would like help in planning for their career or profession should seek the advice of a counselor or program advisor. DVC offers a wide range of educational opportunities and the counseling department is available to help students carefully plan a course of study that takes into consideration personal interests, aptitudes and experiences. Studies show that careful planning will help to ensure students’ college and future success.

Course sequences for CTE programs can be found online at www.dvc.edu/programs.
# DVC Certificate Programs and Associate Degrees

For the most up to date listing of programs and degrees, visit: [www.dvc.edu/programs](http://www.dvc.edu/programs)

### Table of Certificate Programs and Associate Degrees

<table>
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<tr>
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** offered in collaboration with Ohlone College, which grants the degree
# PROGRAM AND COURSE DESCRIPTIONS

## Chapter Four

**Catalog 2017-2018**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding the course descriptions</td>
<td>60</td>
</tr>
<tr>
<td>Coursework and study time per unit</td>
<td>61</td>
</tr>
<tr>
<td>Program length</td>
<td>61</td>
</tr>
<tr>
<td>Program and course descriptions</td>
<td>62</td>
</tr>
<tr>
<td>Accounting (see business accounting)</td>
<td>122</td>
</tr>
<tr>
<td>Addiction studies</td>
<td>62</td>
</tr>
<tr>
<td>Administration of justice</td>
<td>65</td>
</tr>
<tr>
<td>Allied health (see biological science)</td>
<td>104</td>
</tr>
<tr>
<td>Anthropology</td>
<td>72</td>
</tr>
<tr>
<td>Arabic</td>
<td>74</td>
</tr>
<tr>
<td>Architecture</td>
<td>75</td>
</tr>
<tr>
<td>Art</td>
<td>81</td>
</tr>
<tr>
<td>Art digital media</td>
<td>93</td>
</tr>
<tr>
<td>Art history</td>
<td>100</td>
</tr>
<tr>
<td>Astronomy</td>
<td>103</td>
</tr>
<tr>
<td>Biological science</td>
<td>104</td>
</tr>
<tr>
<td>Broadcast communication arts (see film, television and electronic media)</td>
<td>238</td>
</tr>
<tr>
<td>Business</td>
<td>112</td>
</tr>
<tr>
<td>Business accounting</td>
<td>122</td>
</tr>
<tr>
<td>Business management</td>
<td>126</td>
</tr>
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<td>128</td>
</tr>
<tr>
<td>Business real estate</td>
<td>129</td>
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<tr>
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<td>130</td>
</tr>
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<td>Chemistry</td>
<td>131</td>
</tr>
<tr>
<td>Chinese</td>
<td>133</td>
</tr>
<tr>
<td>Communication studies</td>
<td>134</td>
</tr>
<tr>
<td>Computer information systems</td>
<td>137</td>
</tr>
</tbody>
</table>
Computer network technology  143  Journalism  284
Computer science  149  Kinesiology  286
Construction  154  Kinesiology activity  296
Cooperative education  372  Kinesiology combative  304
(see work experience)  372  Kinesiology dance  305
Counseling  160  Kinesiology intercollegiate athletics  308
Culinary arts  162  Library studies  310
Dance  172  Library technology  311
Dental assisting  177  Mathematics  314
Dental hygiene  181  Music  321
Drama  187  Music industry studies  329
Early childhood education  194  Natural science (see biological science)  104
Economics  204  Nutrition  333
Education  206  Oceanography  335
Electrical/electronics technology  207  Persian  336
Energy systems  211  Philosophy  337
Engineering  213  Photography (see art)  81
Engineering technology  218  Physical science  340
English  225  Physics  341
English as a second language  234  Plumbing  343
Environmental science  237  Political science  347
Film, television and electronic media  238  Portuguese  349
French  245  Psychology  350
Geography  248  Real estate (see business real estate)  129
Geology  253  Respiratory therapy  353
German  256  Russian  355
Health science  258  Sign language  356
Heating, ventilation, air conditioning, refrigeration  261  Social science  357
History  265  Sociology  358
Horticulture  270  Spanish  360
Humanities  276  Special education  363
Industrial design  278  Sports medicine/athletic training  286
(see kinesiology)  286
Interdisciplinary studies  279  Steamfitting  365
Italian  279  Transfer studies  371
Japanese  281  Work experience  372
UNDERSTANDING THE COURSE DESCRIPTIONS

Availability of course offerings
The courses listed in the catalog may not be offered every term or every year. Refer to the schedule of classes for courses offered in the current term.

Course numbering
Course descriptions with numbers below 100 are not college level (degree applicable) courses and do not apply as credit toward the associate degree. Courses with numbers between 100 and 299 are generally freshman and sophomore level college courses. Students should carefully review each specific course description to ensure that the selected courses will satisfy requirements for transfer, degree, or certificate goals.

Prerequisites/co-requisites
When a course description lists a prerequisite, it means that the prerequisite must be successfully completed before the student may enroll in that course. If the course lists a co-requisite, students must have successfully completed the course in a prior term or be enrolled in the co-requisite course in the same term. See page 17 for more information about course prerequisites and/or co-requisites.

Recommendations
When a course description lists a recommendation, students are advised to complete the recommended course or courses before enrolling in the selected course. Recommendations increase the student’s ability to succeed.

Grade codes
The course descriptions in this catalog and in the schedule of classes use codes to identify grading and transferability options. These codes are defined as follows:

P/NP - The course may only be taken for a pass/no pass grade.
LR - The course may only be taken for a letter grade.
SC - Students may choose P/NP grading before the fourth week of the term for full-term classes. Please see page 28 for more information about the grade policy.
Coursework and study time per unit

CSU-transferable (CSU)
Courses identified with the CSU code at the end of the description are transferable to campuses of the CSU system. However, they may only be transferable as an elective, not a major or general education requirement. Students should seek the advice of a counselor for complete information about the transferability of courses toward meeting general education or major requirements. Lists of CSU-transferable courses are available at www.assist.org.

UC-transferable (UC)
DVC offers many courses that are transferable to all UC campuses. A course must be on the Transfer Course Agreement (TCA) at the time it is taken to be transferable to UC. Courses identified with a UC code at the end of the description are transferable. Lists of UC-transferable courses are available at www.assist.org.

California Course Identification Numbering System (C-ID)
The Course Identification Numbering System (C-ID) is a statewide numbering system independent from the course numbers assigned by local California community colleges. A C-ID number signals that participating California colleges and universities have determined that courses offered by other California community colleges are comparable in content and scope to courses offered on their own campuses, regardless of their unique titles or local course number. Thus, if a schedule of classes or catalog lists a course bearing a C-ID number, for example COMM 110, students at that college can be assured that it will be accepted in lieu of a course bearing the C-ID COMM 110 designation at another community college. In other words, the C-ID designation can be used to identify comparable courses at different community colleges. However, students should always go to www.assist.org to confirm how each college’s course will be accepted at a particular four-year college or university for transfer credit.

The C-ID numbering system is useful for students attending more than one community college and is applied to many of the transferable courses students need as preparation for transfer. Because these course requirements may change and because courses may be modified and qualified for or deleted from the C-ID database, students should always check with a counselor to determine how C-ID designated courses fit into their educational plans for transfer.

Students may consult the ASSIST database at www.assist.org for specific information on C-ID course designations. Counselors can help students interpret or explain this information. See course descriptions for C-ID course designations.

COURSEWORK AND STUDY TIME PER UNIT

Units of credit are established based on the minimum amount of time students will need to achieve the intended learning outcomes as described by Title 5, section 55021.5. Units of credit established by the faculty for each course reflect generally accepted norms or equivalencies in higher education. In general, for a full-term, three-unit lecture class, students spend three hours each week in class and six hours of study time out of class totaling a minimum of 9 hours each week. The number of units established for laboratory courses is based on the number of hours of laboratory work alone, although many laboratory courses may also require study outside of laboratory hours.

Expected total hours of study outside of class apply equally to short-term and summer classes; students should carefully plan their schedules to include these hours of study during accelerated terms. Online classes require more hours of independent work in lieu of face-to-face meetings and students are advised that total hours of study for such courses will exceed minimums.

The following examples reflect the minimum expected hours of study per term:

<table>
<thead>
<tr>
<th>Sample Course</th>
<th>Units</th>
<th>Lecture hours</th>
<th>Laboratory hours</th>
<th>Minimum out of class study hours</th>
<th>Total hours</th>
<th>Typical hours week for a full term class</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST-120</td>
<td>3</td>
<td>54</td>
<td>0</td>
<td>108</td>
<td>162</td>
<td>9</td>
</tr>
<tr>
<td>COMSC-210</td>
<td>4</td>
<td>54</td>
<td>54</td>
<td>108</td>
<td>216</td>
<td>12</td>
</tr>
<tr>
<td>KNACT-110A</td>
<td>1</td>
<td>0</td>
<td>54</td>
<td>0</td>
<td>54</td>
<td>3</td>
</tr>
<tr>
<td>MATH-135</td>
<td>4</td>
<td>72</td>
<td>0</td>
<td>144</td>
<td>216</td>
<td>12</td>
</tr>
</tbody>
</table>

A unit load of 12 units is generally considered full-time. In the examples provided above, a student enrolling in HIST-120, COMSC-210, KNACT-110A and MATH-135 would expect to devote a minimum of 36 hours to study (in and out-of-class).

PROGRAM LENGTH

Most degree programs at DVC can be completed in two years, assuming students take an average of 15 units per term. Certificate programs vary in length; most certificate programs require less than two years of full-time study to complete and many programs may be completed on a part-time basis. DVC offers two types of certificates; certificates of achievement and certificates of accomplishment. In many cases, courses completed as part of a certificate program can be applied to a degree program. Only certificates of achievement and associate degrees are recorded on the student’s official transcript. Students are advised to meet with a counselor or program advisor to develop an educational plan as not all courses are offered every term.
Program and course descriptions

PROGRAM AND COURSE DESCRIPTIONS

ACCOUNTING

See Business accounting - BUSAC

ADDITION STUDIES – ADS

Diablo Valley College is approved by the California Board of Registered Nurses for continuing education credits. All ADS courses can be used. (Provider # CEP 7992).

Tish Young, Dean
Biological and Health Sciences Division
Physical Sciences Building, Room 263

Possible career opportunities
Addiction studies students develop an in-depth understanding of the addiction process and how to motivate someone towards positive change. The addiction counseling certificate prepares students for a career as a substance abuse counselor, community services worker, or an addiction/prevention/intervention educator.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree Addiction counseling

Students completing the program will be able to...

A. compare and contrast the efficacy of various assessment tools, motivational strategies, and substance abuse treatment approaches.
B. describe the importance of cultural competence and how it relates to becoming an effective addiction counselor.
C. demonstrate basic listening skills.
D. discuss the legal and ethical issues that workers may encounter in the addiction treatment field.
E. explain how addiction affects family systems.
F. compare and contrast various assessment tools, treatment plans and charting protocols.

The associate degree program in addiction counseling provides students with the academic preparation needed for employment in the addiction counseling field. Earning this degree may also facilitate the student’s transfer to a four-year college or university. Students who wish to transfer must consult with program faculty and college counselors to ensure that the requirements for transfer to appropriate institutions are met. To earn an associate in science degree, students must complete each course used to meet a major requirement with a “C” grade or higher. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

Upon completing this degree, a student may apply for any of the state recognized professional credentials offered by the following organizations: California Association of Alcoholism and Drug Abuse Counselors (CAADAC), California Association of Alcohol and Drug Educators (CAADE), and the California Association of Addiction Recovery Resources (CAARR). Each of these credentials has additional testing and/or field practicum hours required, but all of the educational coursework is completed when you finish the addiction counseling program at DVC.

major requirements:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADS-102</td>
<td>Introduction to Motivational Interviewing Skills</td>
<td>3</td>
</tr>
<tr>
<td>ADS-151*</td>
<td>Ethical and Legal Concerns for ADS Counselors</td>
<td>1.5</td>
</tr>
<tr>
<td>ADS-152</td>
<td>Relapse Prevention</td>
<td>3</td>
</tr>
<tr>
<td>ADS-154</td>
<td>Dual Disorders</td>
<td>3</td>
</tr>
<tr>
<td>ADS-155</td>
<td>Diverse Communities and Social Services</td>
<td>3</td>
</tr>
<tr>
<td>ADS-168*</td>
<td>Group Process and Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ADS-170</td>
<td>Introduction to Codependency and Family Issues</td>
<td>3</td>
</tr>
<tr>
<td>ADS-171*</td>
<td>ADS Field Work I</td>
<td>5.5</td>
</tr>
<tr>
<td>ADS-172*</td>
<td>ADS Field Work II</td>
<td>5.5</td>
</tr>
<tr>
<td>HSCI-127</td>
<td>Drugs, Health and Society</td>
<td>3</td>
</tr>
</tbody>
</table>

total minimum required units 33.5

*The above courses have specific prerequisites. See course descriptions for details.

Associate in science degree Addiction studies

Students completing the program will be able to...

A. compare and contrast the prevalence, impact, and cost of substance use, abuse, and dependence to the individual and society.
B. identify the general terminology related to addiction and recovery.
C. analyze common family patterns of behavior and the influence addiction has within the family system.
D. describe ways addiction affects family systems.
The associate degree program in addiction studies provides students with a broad general education while integrating an in-depth exploration of the skills and knowledge to work with people who have addiction problems. This degree will contribute significantly to those who wish to work in occupational fields such as social services, criminal justice, youth services, education, clergy, nursing, and human resources. Earning this degree may also facilitate the student’s transfer to a four-year college or university. Students who wish to transfer must consult with program faculty and college counselors to ensure that the requirements for transfer to appropriate institutions are met. Certain courses may satisfy both major and general education requirements; however, the units are only counted once. To earn an associate in science degree, students must complete each course used to meet a major requirement with a “C” grade or higher.

**Certificate of achievement**

**Addiction counseling**

**Students completing the program will be able to...**

A. compare and contrast the prevalence, impact, and cost of substance use, abuse, and dependence to the individual and society.

B. identify the general terminology related to addiction and recovery.

C. analyze common family patterns of behavior and the influence addiction has within the family system.

D. demonstrate an understanding of how addiction affects family systems.

The addiction counseling certificate provides students with the academic preparation needed for employment in the addiction counseling field. Upon completing this certificate, a student may apply for any of the state recognized professional credentials offered by the following organizations: California Association of Alcoholism and Drug Abuse Counselors (CAADAC), California Association of Alcohol and Drug Educators (CAADE), and the California Association of Addiction Recovery Resources (CAARR). Each of these certificates has additional testing and/or field practicum hours required, but all of the educational coursework is completed when you finish the addiction counseling certificate at DVC.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are primarily available in the evening and late afternoon. Although students may start during any term and progress at their own pace, completion of the certificate will take approximately four terms.

**required courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADS-102</td>
<td>Introduction to Motivational Interviewing Skills</td>
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</tr>
<tr>
<td>ADS-154</td>
<td>Dual Disorders</td>
<td>3</td>
</tr>
<tr>
<td>ADS-155</td>
<td>Diverse Communities and Social Services</td>
<td>3</td>
</tr>
<tr>
<td>ADS-157</td>
<td>Introduction to Codependency and Family Issues</td>
<td>3</td>
</tr>
<tr>
<td>HSCI-127</td>
<td>Drugs, Health and Society</td>
<td>3</td>
</tr>
</tbody>
</table>

**total minimum required units** 33.5

*The above courses have specific prerequisites. See course description for details.

**Certificate of achievement**

**Addiction studies**

**Students completing the program will be able to...**

A. compare and contrast the efficacy of various assessment tools, motivational strategies, and substance abuse treatment approaches.

B. describe the importance of cultural competence and how it relates to becoming an effective addiction counselor.

C. demonstrate basic listening skills.

D. identify the legal and ethical issues that workers may encounter in the addiction treatment field.

E. demonstrate an understanding of how addiction affects family systems.

The addiction studies certificate is for students who want a specialized focus in addiction, treatment and recovery but are not preparing to become an addiction counselor. This certificate may be useful for teachers, human services personnel, or community service personnel who want to have a deeper understanding of the addiction process.

Important note: Once this certificate is completed, if you choose to continue in the addiction studies program, you may apply these units towards the more in-depth addiction counseling certificate. When a student has enough units to earn either certificate, they need to fill out an “application for a certificate” form during the term in which they will complete the units. This form must be picked up and turned in to the Admissions and Records Office. If the form is not filled out, a student will not receive the certificate from the college even if they have completed all the units.
To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are primarily available in the evening and late afternoon. Although students may start during any term and progress at their own pace, completion of the certificate requirements will take a minimum of two terms.

**Required courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADS-102</td>
<td>Introduction to Motivational Interviewing Skills</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ADS-152</td>
<td>Relapse Prevention</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ADS-154</td>
<td>Dual Disorders</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ADS-155</td>
<td>Diverse Communities and Social Services</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ADS-170</td>
<td>Introduction to Codependency and Family Issues</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HSCI-127</td>
<td>Drugs, Health and Society</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Total minimum required units:** 18

**ADS-102 Introduction to Motivational Interviewing Skills**

3 units SC  
- **54 hours lecture per term**  
- **Recommended: Eligibility for ENGL-122 or equivalent**

This course provides an overview of motivational interviewing and the stages of change. Essential communication and charting skills needed for working in the substance abuse and chemical dependency field will be explored. CSU

**ADS-150 Topics in Addiction Studies**

3-4 units SC  
- **Variable hours**

A supplemental course in addiction studies to provide a study of current concepts and problems in addiction studies and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

**ADS-151 Ethical and Legal Concerns for ADS Counselors**

1.5 units SC  
- **27 hours lecture per term**  
- **Prerequisite: ADS-102 (may be taken concurrently) and HSCI-127 or equivalents**  
- **Recommended: Eligibility for ENGL-122 or equivalent**

This course is designed to familiarize students with the legal and ethical issues related to addiction counseling in the state of California. Reporting laws, requirements related to maintaining client confidentiality and boundaries, and recognizing the differing levels of legal and ethical obligations for licensed mental health practitioners and certified addiction counselors versus other voluntary recovery support providers will also be examined. CSU

**ADS-152 Relapse Prevention**

3 units SC  
- **54 hours lecture per term**

This course examines the research that describes the progressive and predictable warning signs of relapse in addicts and alcoholics. Students will study and practice the skills and techniques used to develop a relapse prevention program. CSU

**ADS-154 Dual Disorders**

3 units SC  
- **54 hours lecture per term**

This course addresses the common preexistent or concurrent psychiatric disorders that may surface in the area of substance abuse. The relationships between mental health and substance abuse facilities will be examined. CSU

**ADS-155 Diverse Communities and Social Services**

3 units SC  
- **54 hours lecture per term**

Recommended: Eligibility for ENGL-122 or equivalent

This course investigates the impact of health status, lifestyle/behavior patterns and personal and cultural beliefs on individual and group access to social services. Groups studied will include Asian Americans, African Americans, Hispanic/Latino Americans, Native Americans, and Pacific Rim cultures, among others. The course will examine detail effective strategies for cross- and inter-cultural work in social services, with particular emphasis on addiction prevention, intervention, and treatment services. CSU

**ADS-168 Group Process and Leadership**

3 units SC  
- **54 hours lecture per term**  
- **Prerequisite: ADS-102 and HSCI-127 or equivalents**  
- **Recommended: ADS-151 and 170 or equivalents**

This course explores the theory and practice of group process, group dynamics, and group facilitation. Students will study various types of groups and the stages of group cohesion. They will have the opportunity to develop basic observation and communication skills needed for facilitating support groups for people with histories of substance abuse, codependence, and other addictive behaviors. Administrative tasks related to group leadership responsibilities will also be examined. CSU
ADS-170  Introduction to Codependency and Family Issues  
3 units  SC  
- 54 hours lecture per term  
- Recommended: HSCI-127 and eligibility for ENGL-122 or equivalents  
This course examines the biological, psychological, and sociological aspects of family systems and the influence of addiction on the family. Close examination of family system variables, such as family structure, communication, and emotional bonding with a focus on how addiction impacts functional and dysfunctional patterns of behavior are included. The role of family members in addiction treatment will also be explored. CSU

ADS-171  ADS-Field Work I  
5.5 units  SC  
- 54 hours lecture/135 hours laboratory per term  
- Prerequisite: ADS-102, HSCI-127 and eligibility for ENGL-122 or equivalents  
- Note: It is highly recommended that a student have at least 10 units completed in the addiction studies program before entering the Field Work class.  
In this course students will have the opportunity to work in community clinical settings that serve clients with substance abuse problems. They will gain first-hand experience and develop clinical competency by observing and assisting in assessment, treatment planning, group facilitation, record-keeping, and general agency procedures. The course will consist of seminar and clinical experiences. Students will have supervision on-site, and then debrief their experience with fellow students, sharing what they learned as well as the challenges of providing substance abuse services in a community clinic setting. Additionally, students will explore possible locations for employment and interviewing skills. They will also develop skills in treatment planning and understanding all the necessary requirements for state and other professional certification. CSU

ADS-172  ADS-Field Work II  
5.5 units  SC  
- 54 hours lecture/135 hours laboratory per term  
- Prerequisite: ADS-171 or equivalent  
- Co-requisite: ADS-151 or equivalent (may be taken previously)  
In this course students will have the opportunity to enhance their work in community clinical settings that serve clients with substance abuse problems. They will gain first-hand experience and develop clinical competency by facilitating groups, developing case-management skills, and examining the clinical procedures related to addiction treatment in community settings. The course will consist of seminar and clinical experiences. Students will have supervision on-site, and then debrief their experiences in class, sharing both what they learned and the challenges they faced. Students will also prepare for state certification and employment. CSU

ADS-299  Student Instructional Assistant  
.5-3 units  SC  
- Variable hours  
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.  
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

ADMINISTRATION OF JUSTICE – ADJUS

Obed Vazquez, Dean  
Social Sciences Division  
Faculty Office Building, Room 136

Possible career opportunities

Law enforcement study prepares students for a career as a police officer, sheriff’s deputy, California Highway Patrol Officer (CHP), Federal Bureau of Investigation Agent (FBI), Drug Enforcement Administration Agent (DEA), Secret Service Agent, U.S. Border Patrol Agent, Fish and Game Warden, or Customs Agent. Corrections study prepares students for a career as a correctional officer, parole officer, probation officer, youth counselor, prison warden, or criminologist. A pre-law specialization prepares students for further study towards the advanced degree required to become a lawyer, district attorney, public defender, defense lawyer, judge or bailiff.

Program-level student learning outcomes

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree

Administration of justice

Students completing the program will be able to...

A. demonstrate an understanding of the three parts of the criminal justice system and how they interrelate.

B. demonstrate a working knowledge of the theory and practice of criminal law.

C. demonstrate an understanding of the legal procedures of the United States and California criminal justice systems.
Students wishing to pursue a career in the field of law enforcement, crime scene investigation, probation, parole, corrections, private security, law, criminal behavior studies, rehabilitation programs or the like should consider this two-year program. All students planning to seek employment with a government or private agency after they graduate should speak with a faculty member of the department in order to review the special requirements of the various agencies.

To earn an associate in science degree, students must complete each required course with a “C” grade or higher. Degree requirements can be completed by attending classes in the day, the evening, or both. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

**major requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJUS-120</td>
<td>Introduction to the Administration of Justice</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-121</td>
<td>Criminal Law</td>
<td></td>
</tr>
<tr>
<td>ADJUS-122</td>
<td>Criminal Procedure</td>
<td></td>
</tr>
<tr>
<td>ADJUS-124</td>
<td>Elements of Corrections</td>
<td></td>
</tr>
<tr>
<td>ADJUS-130</td>
<td>Cultural Diversity in Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-221</td>
<td>Legal Aspects of Evidence</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-284</td>
<td>Interviewing and Counseling</td>
<td>3</td>
</tr>
</tbody>
</table>

**plus at least 7-9 units from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJUS-125</td>
<td>Report Preparation for Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-139</td>
<td>Gangs and Threat Groups in America</td>
<td></td>
</tr>
<tr>
<td>ADJUS-203</td>
<td>Crime Scene Investigation</td>
<td>4</td>
</tr>
<tr>
<td>ADJUS-222</td>
<td>Criminal Investigation</td>
<td></td>
</tr>
<tr>
<td>ADJUS-230</td>
<td>Juvenile Procedures</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-250</td>
<td>Terrorism and Homeland Security</td>
<td></td>
</tr>
<tr>
<td>ADJUS-260</td>
<td>Patrol Procedures</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-270</td>
<td>Personal Self Defense and Firearms</td>
<td>2</td>
</tr>
<tr>
<td>ADJUS-280</td>
<td>Community-Based Corrections</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-298</td>
<td>Independent Study</td>
<td>0.5-3</td>
</tr>
</tbody>
</table>

**total minimum required units** 28

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**Associate in science in administration of justice for transfer**

Students completing the program will be able to...

A. achieve an advanced level of understanding about the administration of justice, the law, crime and delinquency, and working with diverse communities.

B. identify and increase understanding of major social issues relating to crime, criminals, prevention and control, and victims.

C. focus on police and social control, law and courts, corrections, juvenile justice, and special problems, trends, and contemporary topics in this field.

A DVC administration of justice student who has earned the associate in science in administration of justice for transfer (AS-T) will be granted priority admission to the CSU into a similar baccalaureate (BA) degree program as long as the student meets all prescribed admission requirements.

The associate in science in administration of justice for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

- Complete 60 semester CSU transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

**major requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJUS-120</td>
<td>Introduction to the Administration of Justice</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-121</td>
<td>Criminal Law</td>
<td></td>
</tr>
</tbody>
</table>

**plus at least 6 units from:**

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJUS-122</td>
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<tr>
<td>ADJUS-130</td>
<td>Cultural Diversity in Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-203</td>
<td>Crime Scene Investigation</td>
<td>4</td>
</tr>
<tr>
<td>ADJUS-221</td>
<td>Legal Aspects of Evidence</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-222</td>
<td>Criminal Investigation</td>
<td></td>
</tr>
<tr>
<td>ADJUS-230</td>
<td>Juvenile Procedures</td>
<td>3</td>
</tr>
</tbody>
</table>

**plus at least 6 units from:**

any course not used above or:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJUS-250</td>
<td>Terrorism and Homeland Security</td>
<td>3</td>
</tr>
<tr>
<td>POLSC-121</td>
<td>Introduction to United States Government</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH-101</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOCIO-120</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>BUS-240</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH-142</td>
<td>Elementary Statistics with Probability</td>
<td>4</td>
</tr>
</tbody>
</table>

**total minimum required units** 18
Certificate of achievement
Administration of justice

Students completing the program will be able to...

A. demonstrate a working knowledge of the basic components of the criminal justice system.

B. demonstrate a working knowledge of the theory and practice of criminal law.

C. demonstrate an understanding of the legal procedures of the United States and California criminal justice systems.

Students wishing to pursue a career in the field of law enforcement, crime scene investigation, probation, parole, corrections, private security, law, criminal behavior studies, rehabilitation programs or the like should consider this two-year program. All students planning to seek employment with a government or private agency after they graduate should speak with a faculty member of the department in order to review the special requirements of the various agencies.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Certificate requirements can be completed by attending classes in the day, the evening, or both.

Required courses:
- ADJUS-120 Introduction to the Administration of Justice
- ADJUS-121 Criminal Law
- ADJUS-122 Criminal Procedure
- ADJUS-124 Elements of Corrections
- ADJUS-130 Cultural Diversity in Criminal Justice
- ADJUS-221 Legal Aspects of Evidence
- ADJUS-284 Interviewing and Counseling

Plus at least 7-9 units from:
- ADJUS-125 Report Preparation for Criminal Justice
- ADJUS-139 Gangs and Threat Groups in America
- ADJUS-203 Crime Scene Investigation
- ADJUS-222 Criminal Investigation
- ADJUS-230 Juvenile Procedures
- ADJUS-250 Terrorism and Homeland Security
- ADJUS-260 Patrol Procedures
- ADJUS-270 Personal Self Defense and Firearms
- ADJUS-280 Community-Based Corrections
- ADJUS-298 Independent Study

Total minimum required units: 28

Certificate of accomplishment
Administration of justice
Correctional specialist

Students completing the program will be able to...

A. demonstrate familiarity with the basic components of the criminal justice system with special emphasis on the correctional system.

B. demonstrate an understanding of the history, culture, organization of criminal gangs and their social and criminal impact on society.

C. demonstrate a working knowledge of the organization, functions and jurisdiction of juvenile agencies and processing and detention of juveniles.

This certificate prepares students for entry-level careers in corrections such as working in prisons, jails, probation officers, parole agent, and counselors working with adult offenders. Completion of this certificate will greatly improve the opportunity for employment in these fields.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Certificate requirements may be completed by a combination of day, evening or weekend courses listed in the Administration of Justice (AJ) Program. Successful completion of the certificate of accomplishment requirements also counts towards the completion of the AJ certificate of achievement.
This certificate prepares students for entry-level careers as crime scene investigators, criminal analysts, and fingerprint examiners, criminalists in limited areas of expertise, crime scene photographers, private security investigators, and criminal investigators. It also is a foundation for those students who wish to pursue advanced careers as criminal profilers or advanced criminalists. Completion of this certificate will greatly improve the opportunity for employment.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Certificate requirements may be completed by a combination of day, evening or weekend courses listed in the Administration of Justice (AJ) Program. Successful completion of the certificate of accomplishment requirements also counts towards the completion of the AJ certificate of achievement.

**Certificate of accomplishment**
Administration of justice

**Crime scene investigator**

**Certificate of accomplishment**

**Administration of justice**

**Crime scene investigator**

**Certificate of accomplishment**

**Administration of justice**

**Criminal law specialist**

**Certificate of accomplishment**

**Administration of justice**

**Criminal procedure**

**Certificate of accomplishment**

**Administration of justice**

**Juvenile counseling**

**Certificate of accomplishment**

**Administration of justice**
Certificate of accomplishment
Administration of justice
Patrol specialist

Students completing the program will be able to...

A. demonstrate an understanding of the three parts of the criminal justice system and how they interrelate.
B. gather, organize and prepare written reports for law enforcement and correctional activities.
C. demonstrate proficiency with handguns and shotguns, an understanding of personal safety and defensive tactics and their legal ramifications.

This certificate prepares students for entry-level careers as law enforcement officers in federal, state, and local agencies as well as private and corporate security. After completing this certificate, students contemplating enrolling in the POST academies will have a solid foundation that will help to ensure academy success. Students entering private security will have much more training than is required by state law. Completion of this certificate will also give the student a greatly improved opportunity for employment.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Certificate requirements may be completed by a combination of day, evening or weekend courses listed in the Administration of Justice (AJ) Program. Successful completion of the certificate of accomplishment requirements also counts towards the completion of the AJ certificate of achievement.

required courses:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJUS-120 Introduction to the Administration of Justice</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-124 Elements of Corrections</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-139 Gangs and Threat Groups in America</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-230 Juvenile Procedures</td>
<td>3</td>
</tr>
<tr>
<td>ADJUS-284 Interviewing and Counseling</td>
<td>3</td>
</tr>
</tbody>
</table>

total minimum required units 15

ADJUS-120 Introduction to the Administration of Justice
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Credit by examination option available

This course addresses the history and philosophy of justice as it evolved throughout the world. It addresses in detail a) the American system of justice and the various subsystems, i.e. the police, the courts, corrections, etc. b) the roles and interrelations of criminal justice agencies c) concepts of crime accusations, punishments, and rehabilitation and d) issues pertaining to ethics, education, and training for participants in the criminal justice system. C-ID AJ 110, CSU, UC

ADJUS-121 Criminal Law
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Credit by examination option available

This course involves a detailed analysis of a) the historical development and philosophy of American law b) statutory law, including classifications, definitions and legality c) case and constitutional law as it applies to situations and individuals in the justice system and d) methodology and concepts of law and their role as a social force. The course emphasizes California criminal statutes. C-ID AJ 120, CSU, UC

ADJUS-122 Criminal Procedure
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Credit by examination option available

This course examines legal processes from pre-arrest, arrest through trial, sentencing and correctional procedures; a review of the history of case and common law; conceptual interpretations of law as reflected in course decisions; a study of case law methodology and case research as the decisions impact upon the procedures of the justice system. California law and procedures are emphasized. C-ID AJ 122, CSU

ADJUS-124 Elements of Corrections
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course is an introduction to major types of criminal behavior, patterns of career offenders, causal factors of crime and delinquency, and methods used in dealing with violators in the justice system. Emphasis will be placed on changing roles in corrections as practiced by law enforcement, courts, and correctional agencies. C-ID AJ 200, CSU


**ADJUS-125  Report Preparation for Criminal Justice**
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course emphasizes the practical aspects of gathering, organizing, and preparing written reports for law enforcement and correctional activities on local, state, and federal levels. It will cover the techniques of communicating facts, information, and ideas effectively in a simple, clear, and logical manner for various types of criminal justice system reports, letters, memoranda, directives and administrative reports. Students will gain practical experience in note-taking, report writing, and presenting testimony in court. CSU

**ADJUS-130  Cultural Diversity in Criminal Justice**
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Credit by examination option available
A theoretical and conceptual overview of multicultural concepts and issues, including those related to gender, age, and sexual preference; an application of those concepts and issues to the three public safety disciplines (Law Enforcement, Judiciary, and Corrections); identification of problems related to increasingly aware diverse populations; and examination of strategies to overcome those problems, particularly in relation to the maintenance of social order. C-ID AJ 160, CSU, UC

**ADJUS-139  Gangs and Threat Groups in America**
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
An introduction to modern criminal gangs, their philosophy, history, structure, impact on the community and the criminal justice system. A study of the legal codes and prosecution of gang members. Evaluation of prison gangs and their impact on the community. An examination of treatment programs in the institutions and the community. CSU

**ADJUS-150  Topics in Administration of Justice**
- .3-4 units  SC
- Variable hours
A supplemental course in administration of justice to provide a study of current concepts and problems in the administration of justice. Specific topics will be announced in the schedule of classes. CSU

**ADJUS-203  Crime Scene Investigation**
4 units  LR
- 54 hours lecture/54 hours laboratory per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course is an in-depth analysis and discussion of the nature and significance of various types of physical evidence commonly found at crime scenes. Areas of emphasis include: (1) the use of physical evidence in the forensic setting, (2) types of physical evidence, (3) the identification, collection and packaging of physical evidence, (4) principles of crime scene photography, (5) crime scene sketching, (6) evidence collection techniques, casting shoe and tool marks, lifting latent fingerprints and (7) the preservation of trace evidence, i.e. physiological fluids, hair, soil, fibers, glass, etc. This course combines the theoretical concepts associated with use of physical evidence in the forensic setting with student involvement in the processing of simulated crime scenes. The laboratory component, which will focus on the student applying the principles learned in lectures, will be mandatory. C-ID AJ 150, CSU

**ADJUS-221  Legal Aspects of Evidence**
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Credit by examination option available
This course covers the origin, development, philosophy and constitutional basis of evidence; procedural considerations affecting arrest, search and seizure, kinds and degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies. C-ID AJ 124, CSU

**ADJUS-222  Criminal Investigation**
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Credit by examination option available
This course presents fundamentals of investigation; crime scene search and recording; collection and preservation of physical evidence; scientific aids; modus operandi; sources of information; interviews and interrogation; follow-up; ethical issues for investigators; and case preparation. C-ID AJ 140, CSU

**ADJUS-230  Juvenile Procedures**
3 units  LR
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Credit by examination option available
This course examines the organization, function, and jurisdiction of juvenile agencies; the processing and detention of juveniles; juvenile case disposition; juvenile statutes and court procedures. C-ID AJ 220, CSU
**ADJUS-250** Terrorism and Homeland Security  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course is an introduction to contemporary terrorism and its relation to homeland security. There will be an emphasis on the growing threat of homegrown violent extremism and weapons of mass destruction. Motivational factors of international and domestic terrorism organizations, the basic elements of government intelligence, prevention measures, responses to terrorism, and disciplines within the counter-terrorism profession will be discussed. This course meets the California Bureau of Security and Investigative Services requirement for training in weapons of mass destruction. CSU

**ADJUS-260** Patrol Procedures  
3 units  LR  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
- Note: Credit by examination option available  
This course covers the responsibilities, techniques, purposes and methods of police patrol. Routine patrol, crisis intervention, officer survival and investigation techniques and the effect of the patrol officer’s decision making and judgment on the community will also be examined. CSU

**ADJUS-270** Personal Self Defense and Firearms  
2 units  SC  
- 18 hours lecture/54 hours laboratory per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
- Note: Participation in vigorous physical activity and a payment of a mandatory range fee required. Felony conviction prohibits enrollment.  
This course provides training in personal self-defense and the use of firearms. Originally developed for law enforcement personnel recertification, the course will benefit anyone desiring proficiency with handguns, personal safety and defensive tactics. The course will also include moral and legal aspects of the use of weapons, safety in the use of side arms and shotguns, and training in the use of pepper spray and stun guns. CSU

**ADJUS-280** Community-Based Corrections  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course is an introduction to community-based corrections: its philosophy, history, legal mandates, relations to courts, basic procedures, and common treatment approaches. Legal codes affecting probation and parole; evaluation of the prison system and inmate community; parole supervision and examination of the success of a contemporary prison and parole system will be covered. There will be a specific emphasis on California’s probation, institutions and parole system. CSU

**ADJUS-284** Interviewing and Counseling  
3 units  LR  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course is an introduction to the concepts and techniques of communication, casework and counseling as utilized by practitioners in the administration of justice field. Students will review the interview and interrogation process as applicable to the social work function in policing and corrections. This is a basic course for students planning to enter, or for those already employed within the administration of justice field. CSU

**ADJUS-284** Interviewing and Counseling  
3 units  LR  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course is an introduction to the concepts and techniques of communication, casework and counseling as utilized by practitioners in the administration of justice field. Students will review the interview and interrogation process as applicable to the social work function in policing and corrections. This is a basic course for students planning to enter, or for those already employed within the administration of justice field. CSU

**ADJUS-288** Independent Study  
.5-3 units  SC  
- Variable hours  
- Note: Submission of acceptable educational contract to Department and Instruction Office is required.  
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

**ADJUS-299** Student Instructional Assistant  
.5-3 units  SC  
- Variable hours  
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.  
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

**ALLIED HEALTH**

See Biological science - BIOSC
Anthropology

ANTHROPOLOGY – ANTHR

Obed Vazquez, Dean
Social Sciences Division
Faculty Office Building, Room 136

Possible career opportunities
Anthropology is a basic component for careers like anthropologist, anthropology instructor, museum curator, population analyst, urban planner, social services consultation, and environmental impact analyst. Most career options require more than two years of college study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts in anthropology for transfer
Students completing the program will be able to...
A. demonstrate an understanding of core knowledge within the anthropology discipline.
B. demonstrate the ability to communicate ideas clearly and persuasively in writing.
C. demonstrate the ability to analyze a problem and draw correct inferences using qualitative and/or quantitative analysis.
D. demonstrate the ability to evaluate theory and critique research within the anthropology discipline.

The anthropology program at Diablo Valley College offers students the opportunity to study humankind from the broadest biological, historical, and geographical perspectives. Anthropology is a multidisciplinary and yet holistic way to study all aspects of humankind, from biological origins to ways of social behavior, past and present. Anthropology presents to the student a world view that is personally enriching as well as practical. Courses in the program offer knowledge of social and cultural aspects of behavior, as well as the biological nature of humans. Courses included in the anthropology major are intended to give a general understanding of human biology, ecology, evolution, prehistory, and the nature of human cultures.

This curriculum is designed to provide an opportunity for the anthropology major to achieve an associate in arts degree while completing the requirements for transfer to a California State University (CSU) or other four-year college or university to earn a bachelor’s degree in anthropology. A baccalaureate degree is recommended preparation for those considering professional careers in anthropology. Completion of this curriculum will demonstrate commitment to the field and provide comprehensive preparation for upper-division work.

The associate in arts in anthropology for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:
- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of "C" or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

major requirements: 

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>units</th>
</tr>
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<tbody>
<tr>
<td>ANTHR-125</td>
<td>Introduction to Archaeology and Prehistory</td>
<td>3</td>
</tr>
<tr>
<td>ANTHR-130</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANTHR-140</td>
<td>Biological Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>plus at least 3 units from:</td>
<td></td>
<td></td>
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<tr>
<td>ANTHR-120</td>
<td>Magic, Witchcraft, and Religion in the Americas</td>
<td>3</td>
</tr>
<tr>
<td>ANTHR-135</td>
<td>Native Americans</td>
<td>3</td>
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<tr>
<td>ANTHR-141L</td>
<td>Biological Anthropology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>GEOG-120</td>
<td>Physical Geography</td>
<td>3</td>
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<td>MATH-142</td>
<td>Elementary Statistics with Probability</td>
<td>4</td>
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<tr>
<td>or</td>
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<tr>
<td>BUS-240</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>plus at least 3 units from any course not used above or:</td>
<td></td>
<td></td>
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<tr>
<td>BIOSC-139</td>
<td>Human Anatomy</td>
<td>5</td>
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<tr>
<td>GEOG-125</td>
<td>Introduction to Geographic Information</td>
<td></td>
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<td></td>
<td>Systems (GIS)</td>
<td>3</td>
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<tr>
<td>GEOL-120</td>
<td>Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL-122</td>
<td>Physical Geology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PSYCH-215</td>
<td>Introduction to Research Methods in Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOCIO-123</td>
<td>Introduction to Social Research</td>
<td>3</td>
</tr>
</tbody>
</table>
plus at least 3 units from any course not used above or:
ANTHR-115  Primate Evolution and Adaptation 3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course is an introduction to the biology, behavior, ecology, and evolutionary history of the primate order. An emphasis will be placed on the following topics: evolutionary theory; mammalian biology, anatomy, and osteology; primate behavior, ecology, and biogeography; primate evolutionary history; fossil man. CSU, UC

ANTHR-120  Magic, Witchcraft, and Religion in the Americas 3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course presents a cross-cultural, multi-cultural examination of the forms and functions of supernatural belief systems and associated rituals that have developed in various societies in the Americas. Basic ethnographic and archaeological concepts and methodologies will be introduced and applied to the assessment and analysis of selected New World cultural/religious traditions. Emphasis will be placed on understanding religious belief systems within their given social contexts. The course will also provide a comparative assessment of the major prehistoric and historic social and religious patterns that developed in the Americas. CSU, UC

ANTHR-125  Introduction to Archaeology and Prehistory 3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course is an introduction to the study of concepts, theories, data and models of anthropological archaeology that contribute to our knowledge of the human past. Students will study the nature of scientific inquiry; the history and interdisciplinary nature of archaeological research; dating techniques; methods of survey, excavation, analysis, and interpretation; cultural resource management; professional ethics; and selected cultural sequences. Emphasis is placed on reconstructing ancient life ways with the aim of understanding the development of social and technological complexity in the prehistoric and the historic past. C-ID ANTH 150, CSU, UC

ANTHR-126  Introduction to Archaeological Field Methods 3 units  SC
- 18 hours lecture/108 hours laboratory per term
- Prerequisite: ANTHR-125 or equivalent (may be taken concurrently)
- Recommended: Eligibility for ENGL-122 or equivalent
This course provides training in surface survey, mapping, scientific excavation, classification and analysis of excavated material, writing interpretive reports, and preparation of museum exhibits. Aspects emphasized will depend on available archaeological opportunities in the Bay Area. Students will spend a significant portion of class time in the field. CSU, UC

ANTHR-130  Cultural Anthropology 3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course explores how anthropologists study and compare human culture to understand the broad arc of human experience focusing on a set of central issues. Topics include how people around the world: make their living; organize themselves socially, politically and economically; communicate; relate to each other through family and kinship ties; develop belief systems; apply gender, racial and ethnic identity labels; have shaped and been shaped by social inequalities such as colonialism; and navigate cultural change and processes of globalization that affect us all. Ethnographic case studies will be utilized to highlight similarities and differences. C-ID ANTH 120, CSU, UC

ANTHR-135  Native Americans 3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course is a survey of the Native American cultures that developed in North America. The course also explores the effects of European contact, conquest, colonization, United States expansion, acculturation, U.S. Government policies, wars and treaties, and reservation life of Native Americans, as well as the past and present roles of Native Americans in U.S. society. CSU, UC

ANTHR-140  Biological Anthropology 3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course introduces the concepts, methods of inquiry, and scientific explanations for biological evolution and their application to the human species. Issues and topics will include, but are not limited to, genetics, evolutionary theory, human variation and biocultural adaptations, comparative primate anatomy and behavior, and the fossil evidence for human evolution. The scientific method and the theory of biological evolution serve as foundations of the course. C-ID ANTH 110, CSU, UC
ANTHR-141L Biological Anthropology Laboratory
1 unit SC
- 54 hours laboratory per term
- Prerequisite: ANTHR-140 (may be taken concurrently) or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent

An introductory laboratory course in which scientific methodology is taught and used to explore/experiment with topics found in introductory physical anthropology and primate evolution courses. Topics will include: paleontology, hands-on study of fossils, Mendelian and population genetics, human variability, forensics, medical anthropology, epidemiology, non-human primates, primate dental and skeletal anatomy, paleoprimatology, paleoanthropology, hominin dietary patterns, the study of hominids as bio-culturally adapted animals, and a survey of general methodologies utilized in physical anthropological research. C-ID ANTH 115L, CSU, UC

ANTHR-155 Topics in Anthropology .3-4 units SC
- Variable hours

A supplemental course in anthropology to provide a study of current concepts and problems in anthropology and related disciplines. Specific topics will be announced in the schedule of classes. CSU

ANTHR-298 Independent Study .5-3 units SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

ANTHR-299 Student Instructional Assistant .5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

ARABIC – ARABC

Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

Possible career opportunities
The study of Arabic can open up opportunities in communications, foreign trade and banking, transportation, government, the Foreign Service, tourism, library services, teaching, professional translating, journalism, and all levels of education, including university teaching. Most foreign language careers require more than two years of study.

ARABC-120 First Term Arabic
5 units SC
- 90 hours lecture per term

This is a beginning level language course in Modern Standard Arabic. The course will be proficiency based, covering all four language skills (speaking, listening, reading, and writing). Considerable emphasis will be placed on active use of the language both in class and in daily homework assignments. The course introduces students to the basic phonology and script of the Arabic alphabet, as well as aspects of the sociolinguistics of Arab culture. Students will practice writing the letters in sequence while developing comprehension skills. CSU, UC

ARABC-121 Second Term Arabic
5 units SC
- 90 hours lecture per term
- Prerequisite: ARABC-120 or two years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is the second level language course in Modern Standard Arabic. This course is designed to build upon skills in reading and writing developed in ARABC-120. Students will gain increased vocabulary and a greater understanding of more complex grammatical structures. They will be able to approach prose, fiction, and non-fiction written in the language. Students will also increase their proficiency in Arabic script and sound system, widen their working vocabulary, learn key grammatical points, and practice conversation and dictation. Students deliver oral presentations and write academic papers in Arabic. A variety of Arabic texts covering many subjects of interest such as literature, classical writing, poetry, media reports, and news will be introduced. CSU, UC
ARGAB-150 Topics in Arabic
.3-4 units SC
• Variable hours
A supplemental course in Arabic to provide a study of current concepts and problems in Arabic and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

ARGAB-299 Student Instructional Assistant
.5-3 units SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

ARCHITECTURE – ARCHI

Tish Young, Dean
Physical Sciences and Engineering Division
Physical Sciences Building, Room 263

Possible career opportunities
Students are provided with a strong background in spatial composition, design theory, and production methods that prepare them for employment as an architectural technician. Many general courses in the architecture program offer education in areas that are also applicable to an entry-level internship position performing manual or computer-aided drafting, furniture or cabinet design, or architectural rendering and illustration.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Architecture design

Students completing the program will be able to...
A. communicate architectural concepts using graphic conventions and representational methods.
B. demonstrate an understanding of drawing methods and graphic compositional techniques.
C. construct physical models of architectural elements and spaces.
D. demonstrate an understanding of building components, structures and systems in relation to design.
E. identify notable architects, design concepts, canonical buildings and precedents in architecture.
F. identify the historical and contemporary role of architects in the profession and related design fields.
G. describe the role of environmental design, energy use and sustainable design practices in the profession and in buildings.
H. utilize digital means of production, representation and/or digital fabrication methods for the creation and manipulation of architectural images and forms.

Students in the architectural design program will develop the necessary skills to analyze, modify or create architectural space and the abilities to present their ideas in graphic form using a variety of media. The program emphasizes spatial and architectural theories relating to design, architectural history, and methods of graphic composition and presentation.

The DVC architecture design major is intended for transfer. Students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is not generally advised.

To earn an associate in science degree with a major in architecture design, students must complete each course used to meet a major requirement with a “C” grade or higher, maintain an overall GPA of 2.5 or higher and complete all general education requirements as listed in the catalog. Many upper level architecture degree programs require specific physics, math and general education preparation. Please consult the transfer institution for required courses. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

<table>
<thead>
<tr>
<th>major requirements:</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHI-120 Introduction to Architecture and Environmental Design</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI-121 Architectural Design I</td>
<td>4</td>
</tr>
<tr>
<td>ARCHI-130 Architectural Graphics I</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI-131 Architectural Graphics II</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI-135 Digital Tools for Design</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI-220 Architectural Design II</td>
<td>4</td>
</tr>
<tr>
<td>ARCHI-221 Architectural Design III</td>
<td>4</td>
</tr>
<tr>
<td>ARCHI-244 Architectural Practice and Working Drawings I</td>
<td>3</td>
</tr>
<tr>
<td>CONST-144 Materials of Construction</td>
<td>3</td>
</tr>
</tbody>
</table>
As an architecture technology student, students gain an in-depth understanding of the requirements and skills necessary for employment in an architect’s office. 

Architectural interns, draftsmen or designers prepare technical and presentation drawings, draft copies of specifications and cost estimates, revise plans, trace details from various sources, operate printing machines, and assemble prints and other documents for projects. Graduates with these skills are also employed by landscape architects, industrial designers, interior designers, and engineers.

To earn an associate in science degree in architecture technology, students must complete each course used to meet a major requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the major. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

To earn a certificate of achievement in architecture technology, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available in the day, and some are also offered in the evening.
### ARCHI-120 Introduction to Architecture and Environmental Design
3 units LR
- 36 hours lecture/72 hours laboratory per term
- This course is an introduction to the professional field of architecture, environmental design, landscape design, and urban planning. An overview of the practice of environmental design with concepts in design methods and theory, analysis and problem solving, history of design, and the profession is presented. There is an emphasis on beginning design projects utilizing drawing, model making and computers. CSU, UC

### ARCHI-121 Architectural Design I
4 units SC
- 36 hours lecture/108 hours laboratory per term
- Prerequisite: ARCHI-120 or equivalent and ARCHI-130 (may be taken concurrently) or equivalent
- Recommended: ARCHI-135 or equivalent
- This first-level studio design course focuses on development of fundamental design skills and spatial theory. Topics include spatial qualities of architecture, composition and ordering systems, circulation and movement through space, daylighting, introductory structural systems, precedent studies and architectural theory. CSU, UC

### ARCHI-126 Computer Aided Design and Drafting - AutoCAD
3 units SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ARCHI-119 or ENGT-119 or equivalent
- Note: Same as ENGT-126. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree. Credit by examination option available.
- This introductory course covers the fundamentals of AutoCAD, a computer design drafting program, applied to the creation of technical drawings. Hands-on training utilizing a comprehensive overview of the software package and its applications to architectural drafting is stressed. CSU, UC (credit limits may apply to UC - see counselor)

### ARCHI-127 Introduction to Revit
3 units SC
- 36 hours lecture/54 hours laboratory per term
- Note: Credit by examination option available.
- This course is an introduction to Revit software and covers fundamentals of the Revit operating environment, file structure, organization and creation of three-dimensional and two-dimensional construction models and documents. CSU

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**required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
<th>Notes</th>
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<td>ARCHI-120</td>
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<td>Computer Aided Design and Drafting - AutoCAD</td>
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<td>Architectural Graphics I</td>
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<td>ARCHI-244</td>
<td>Architectural Practice and Working Drawings I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CONST-124</td>
<td>Construction Details and Specifications</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CONST-135</td>
<td>Construction Processes: Residential</td>
<td>4</td>
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<tr>
<td>CONST-144</td>
<td>Materials of Construction</td>
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**plus at least 6 units from:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
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<tr>
<td>ARCHI-131</td>
<td>Architectural Graphics II</td>
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</tr>
<tr>
<td>ARCHI-226</td>
<td>Computer Aided Drafting Design, Advanced Concepts - AutoCAD</td>
<td></td>
</tr>
<tr>
<td>ARCHI-296</td>
<td>Internship in Occupational Work Experience Education in ARCHI</td>
<td>2-3</td>
</tr>
<tr>
<td>CONST-116</td>
<td>Plane Surveying</td>
<td>4</td>
</tr>
<tr>
<td>CONST-181</td>
<td>Building Code Interpretation: Non-Structural</td>
<td>3</td>
</tr>
<tr>
<td>CONST-183</td>
<td>Title 24: Energy Conservation Codes</td>
<td>3</td>
</tr>
</tbody>
</table>
### ARCHI-130  Architectural Graphics I
3 units  LR

- 36 hours lecture/72 hours laboratory per term
- **Recommended:** ARCHI-119 or ENGT-119 or equivalent

This course is an introduction to architectural graphics related to projection systems, representation of architectural forms, rendering and shadow casting. An overview of history and methods of graphic representation used by architects and an application of drafting, drawing and rendering methods is presented. Problem-solving in orthographic and pictorial projection and drawing, architectural lettering, shades and shadows, and color rendering techniques are covered. There is an emphasis on mechanical drafting with pencil and beginning introduction to other art media. CSU, UC

### ARCHI-131  Architectural Graphics II
3 units  LR

- 36 hours lecture/72 hours laboratory per term
- **Prerequisite:** ARCHI-130 or equivalent

This course is an advanced exploration of drawing techniques utilizing freehand and mechanical drawing methods of representation. Emphasis is placed on perspective drawing, shade and tone, color theory and composition. A continuing exploration of media for architectural rendering and representation is included. CSU, UC

### ARCHI-135  Digital Tools for Design
3 units  SC

- 36 hours lecture/72 hours laboratory per term
- **Note:** ARCHI-135 and ARCHI-136 may be taken in any order.

This course is an introduction to the use of computers in design communication and representation. Topics presented include two-dimensional and three-dimensional graphics utilizing Adobe Illustrator, InDesign, Photoshop, AutoCAD, Sketchup and other related programs. Students will be introduced to additional concepts in processing digital images, digital photography, scanning and printing. CSU

### ARCHI-136  Digital Tools for Architecture
3 units  SC

- 36 hours lecture/72 hours laboratory per term
- **Note:** ARCHI-135 and ARCHI-136 may be taken in any order.

This course covers the use of computers in architectural design for advanced architectural graphics, three-dimensional (3-D) modeling, rendering and fabrication. Topics include Rhinoceros 3-D modeling software and V-Ray rendering software for architectural presentations, modeling of complex non-orthogonal geometries and architectural forms, fabrication utilizing the campus laser cutter and current computer graphics and architectural rendering standards. CSU

### ARCHI-137  Digital Fabrication and Prototyping
3 units  SC

- 36 hours lecture/72 hours laboratory per term

This is an introductory course in design prototyping and digital fabrication methods. Manual and digital modeling, with an exploration of computer numerical control (CNC) fabrication methods will be explored. Shaping and material removal using CNC fabrication tools for a variety of materials, including plastics, wood, metals and ceramics will be practiced in addition to three-dimensional printing methods. CSU

### ARCHI-138  Introduction to Parametric Modeling with Grasshopper
2 units  SC

- 24 hours lecture/36 hours laboratory per term
- **Recommended:** ARCHI-136 or equivalent

This course is an introduction to Grasshopper for the generation of complex three-dimensional architectural forms in Rhinoceros 3D modeling software. The course covers basic scripting and management of data within the Grasshopper environment. The course will conclude with the construction of a physical model generated in Grasshopper to be fabricated using the campus laser cutter and assembled on campus. The finished model will be displayed on campus. CSU

### ARCHI-150  Topics in Architecture
3-4 units  SC

- **Variable hours**

A supplemental course in architecture to provide a study of current concepts and problems in architecture. Specific topics to be announced in the schedule of classes. CSU

### ARCHI-156  History of World Architecture: Early Civilizations to Middle Ages
3 units  SC

- 54 hours lecture per term
- **Recommended:** Eligibility for ENGL-122 or equivalent
- **Note:** ARCHI-156, 157 and 158 may be taken in any order

Architecture and urbanism from prehistory to the Middle Ages. Social, cultural, and physical conditions that influenced the built environment in the Mediterranean region, Europe, Asia, Africa, and Pre-Columbian Americas. Topics include early megalithic tombs and structures, Native American dwellings, architecture of Egypt, Mesopotamia, Persia and the Middle East, early civilizations of the Aegean, temples and cities of Greece, architecture and engineering of Rome, and early medieval structures after the fall of Rome. CSU, UC
ARCHI-157  History of World Architecture: Middle Ages to 18th Century  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
• Note: ARCHI-156, 157 and 158 may be taken in any order  
This course covers world architecture and urbanism from the Middle Ages until the end of the 18th Century. Exploration of social, cultural, and physical conditions that influence the built environment of Europe, Asia, and the Colonial Americas will be discussed. This course also covers the development of the Gothic cathedral, art and architecture of the Renaissance, Baroque design in Europe, architecture of Japan, China and India, historic buildings in Colonial America, and architectural developments in Europe during the 18th Century including Romanticism and later Greek and Gothic revival movements. CSU, UC  

ARCHI-158  History of World Architecture: 18th Century to Present  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
• Note: ARCHI-156, 157 and 158 may be taken in any order  
This course presents architecture and urbanism of the modern world, from the 18th century to the present. Exploration of social, cultural, and physical conditions influencing the built environment of Europe, Asia, and the Americas. Course covers American architectural contributions of Frank Lloyd Wright and the Chicago School of Architecture, Art Nouveau and the work of Gaudi with in-depth discussion of the influence of industrialization in architecture as well as topics in Russian Constructivism, 20th Century Modernism, Post-modernism and Deconstructivism. CSU, UC  

ARCHI-160  History of American Architecture  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
This course is a survey of American architectural history from Native American dwellings to the present. The architectural influence of immigrant groups is presented, as well as the influences of architectural design movements in the United States through the course of history. CSU, UC  

ARCHI-165  Architecture and Urbanism of Paris and France  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
This course will include the history of the urban development of Paris from early Roman settlements to the present. The cultural and architectural developments during major significant historical periods will be presented. Influence from social and political movements on growth, design, and construction of buildings and public urban spaces are discussed. This course also reviews the architectural history of Versailles, chateaux of the Loire Valley and neighboring Chartres Cathedral. CSU, UC  

ARCHI-207  Environmental Control Systems  
3 units  SC  
• 54 hours lecture per term  
• Recommended: MATH-090 or equivalent  
This course covers the theory and application of climate, energy use and comfort as determinants of architectural form in small-scale buildings. Methods of ventilating, cooling, heating, and lighting will be discussed. Topics include passive solar techniques, cross and stack ventilation, daylighting and an introduction to mechanical systems for environmental control in buildings. There will be an emphasis on green building technology and sustainable practices in design of environmental control systems. CSU  

ARCHI-211  Architectural Structures  
3 units  LR  
• 54 hours lecture per term  
• Prerequisite: PHYS-120 (may be taken concurrently) or equivalent  
This course is an introduction to the role of structures in the making of buildings, statics, and the creation of simple three-dimensional structures. The development of skills to analyze structures composed of axial force (truss) members will also be covered. CSU  

ARCHI-215  Architectural Portfolio Workshop  
1.5 units  SC  
• 18 hours lecture/36 hours laboratory per term  
• Recommended: ARCHI-121 or equivalent  
• Note: Students must have a body of work to document and publish in a portfolio  
Students will develop digital and printed architectural design portfolios for transfer, job placement or professional purposes. Course covers printing, binding and publication techniques, graphic design methods and portfolio formats utilizing Adobe Creative Suite. Instruction in digital photography, scanning, printing and other methods of custom graphic publication including laser fabrication and engraving for portfolio design. Highly recommended for architecture students transferring to outside institutions or seeking employment. CSU  

ARCHI-220  Architectural Design II  
4 units  LR  
• 36 hours lecture/108 hours laboratory per term  
• Prerequisite: ARCHI-121 and 135 or equivalents  
• Recommended: ARCHI-136 or equivalent  
This course is a second-level studio design class continuing the study of architectural design. It focuses on development of fundamental design skills utilizing concepts related to site planning and site analysis with projects of greater complexity. A continuing investigation of topics in material qualities, general methods of assembly and construction, and human factors in design is covered. Methods of presentation and design development include drawing, model making, and architectural reviews and critiques. CSU, UC
ARCHI-221  Architectural Design III  
4 units  LR  
- 36 hours lecture/108 hours laboratory per term  
- Prerequisite: ARCHI-136 (may be taken concurrently) or equivalent and ARCHI-220 or equivalent  

This course is a third-level studio design class continuing the study of architectural design. It focuses on the application of advanced design skills and spatial theories to projects of greater architectural complexity. It includes design problems and projects incorporate advanced concepts of site planning, urban design, integration of structural and mechanical systems, programming and circulation. CSU, UC

ARCHI-226  Computer Aided Drafting Design, Advanced Concepts - AutoCAD  
3 units  SC  
- 36 hours lecture/72 hours laboratory per term  
- Recommended: ARCHI-126 or ENGTC-126 or equivalent  
- Note: Same as ENGTC-226. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course covers the concepts and applications of constructing digital three-dimensional (3D) models and photorealistic renderings for presentation using AutoCAD, 3D Studio Max and Alias. Advanced techniques for surface, wireframe and solid modeling will be presented. Students will explore lighting, materials mapping and rendering as they apply to architecture, engineering and industrial design. CSU, UC (credit limits may apply to UC - see counselor)

ARCHI-244  Architectural Practice and Working Drawings I  
3 units  SC  
- 36 hours lecture/72 hours laboratory per term  
- Recommended: ARCHI-130 and CONST-144 or equivalents  

This course will cover methods and processes for the interpretation and creation of architectural working drawings, connections, details and specifications. The technical concepts related to the construction of small-scale structures and their representation in construction documents will be discussed. Students will be introduced to the design review process, along with Construction Specifications Institute (CSI) format, standards of practice and graphic representation, and the role of the architect, client and local governing agencies. CSU

ARCHI-296  Internship in Occupational Work Experience Education in ARCHI  
1-4 units  SC  
- May be repeated three times  
- Variable hours  
- Note: In order to enroll in the ARCHI-296 course, students must be interning or volunteering, register for the course, complete an online Employment Form, and participate in an orientation. The Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

ARCHI-296 is a supervised internship in a skilled or professional level assignment in the student’s major field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

ARCHI-298  Independent Study  
.5-3 units  SC  
- Variable hours  
- Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

ARCHI-299  Student Instructional Assistant  
.5-3 units  SC  
- Variable hours  
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
ART – ART

Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

Possible career opportunities
Career options include professions engaged in creating works of art as an artist, painter, sculptor, ceramist, engraver, printmaker, metal smith, illustrator, designer, muralist, and jeweler. Some careers requiring an education beyond the associate degree include: art critic, art dealer, educator, historian, arts administrator, advertising specialist, computer graphics illustrator, display designer, gallery director, and visual information specialist.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts degree
Fine arts
Students completing the program will be able to:
A. demonstrate basic drawing skills, color manipulation, and design principles in selected areas of emphasis,
B. apply building techniques to create three dimensional forms in selected areas of emphasis,
C. demonstrate an understanding of the basic principles and concepts of analog and digital photography in selected areas of emphasis,
D. critically evaluate multimedia design techniques and their uses in selected areas of emphasis,
E. analyze works of art in terms of their historical circumstances and cultural values,
F. employ critical thinking skills regarding their artwork and the artwork of others.

The fine arts major is a two-year degree program of transferable courses open to all students. The program requirements are designed for those interested in art as professional practice and as preparation for transfer. The major has three components. The first component is a core of two required foundations fine arts studio courses. The second component is two required art history courses. The third component offers students choices in 10 emphasis areas. Students may select an emphasis in drawing, painting, sculpture, photography, printmaking, ceramics, art digital media, graphic design, art history, or metalsmithing, but are encouraged to choose within a wide range of these beginning courses for transfer. Fine arts faculty and staff are dedicated to assisting students in exploring job opportunities, internships, and transferring to four-year institutions of higher learning.

The DVC fine arts major is intended for transfer. Students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is not generally advised.

To earn an associate in arts degree with a major in fine arts, students must complete each course used to meet a major requirement with a “C” grade or higher, maintain an overall GPA of 2.5 or higher in the coursework required for the major and complete all general education requirements as listed in the catalog. Degree requirements may be completed by attending classes in the day, evening, or weekends. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

major requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ART-101 Introduction to Two-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>ART-102 Introduction to Sculpture and Three-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>plus at least 6 units from:</td>
<td></td>
</tr>
<tr>
<td>ARTHS-193 History of Asian Art</td>
<td>3</td>
</tr>
<tr>
<td>ART-195 History of Prehistoric and Ancient Art</td>
<td>3</td>
</tr>
<tr>
<td>ARTHS-196 History of Medieval and Renaissance Art</td>
<td>3</td>
</tr>
<tr>
<td>ARTHS-197 History of Baroque to 20th Century Art</td>
<td>3</td>
</tr>
<tr>
<td>ARTHS-199 Contemporary Art History</td>
<td>3</td>
</tr>
<tr>
<td>plus at least 12 units from a minimum of three areas of specialization*:</td>
<td></td>
</tr>
<tr>
<td>ARTHS-193 History of Asian Art</td>
<td>3</td>
</tr>
<tr>
<td>ART-195 History of Prehistoric and Ancient Art</td>
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<td>ARTHS-197 History of Baroque to 20th Century Art</td>
<td>3</td>
</tr>
<tr>
<td>ARTHS-199 Contemporary Art History</td>
<td>3</td>
</tr>
</tbody>
</table>
The associate in arts in studio arts for transfer offers students a curricular program for studying a variety of beginning courses within the field of art practice. The student with associate in arts in studio arts for transfer is prepared for upper division work in the major at four-year institutions. The curriculum develops a student’s critical thinking skills, hones problem-solving skills, and establishes visual literacy.

The associate in arts in studio arts for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.
Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor's degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSU GE/ICETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate's degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

**major requirements:**

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<tr>
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<tr>
<td>ART-101</td>
<td>Introduction to Two-Dimensional Design</td>
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</tr>
<tr>
<td>ART-102</td>
<td>Introduction to Sculpture and Three-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>ART-105</td>
<td>Drawing I</td>
<td>3</td>
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<tr>
<td>ARTHS-196</td>
<td>History of Medieval and Renaissance Art</td>
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<td>History of Baroque to 20th Century Art</td>
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plus at least 3 units from:

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</tr>
<tr>
<td>ARTHS-199</td>
<td>Contemporary Art History</td>
<td>3</td>
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</table>

plus at least 9 units from:

**applied design**

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<tr>
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<th>Course Name</th>
<th>Units</th>
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<tbody>
<tr>
<td>ART-146</td>
<td>Metalsmithing and Jewelry I</td>
<td>3</td>
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<tr>
<td>ART-147</td>
<td>Metalsmithing and Jewelry II</td>
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**ceramics**

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<tr>
<td>ART-152</td>
<td>Wheel-Thrown Pottery I</td>
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<tr>
<td>ART-154</td>
<td>Hand-Built Ceramics I</td>
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<td>ART-153</td>
<td>Wheel-Thrown Pottery II</td>
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<td>ART-155</td>
<td>Ceramic Sculpture I</td>
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<tr>
<td>ART-156</td>
<td>Figurative Ceramics I</td>
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**color**

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<tr>
<td>ART-103</td>
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**digital art**

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<td>ARTDM-171</td>
<td>Introduction to Web Design</td>
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<td>ARTDM-214</td>
<td>Introduction to Graphic Design</td>
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**drawing**

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<td>ART-107</td>
<td>Figure Drawing I</td>
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<td>ART-108</td>
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**other media**

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<td>ARTDM-224</td>
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**photography**

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<td>ART-161</td>
<td>Photography II</td>
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**printmaking**

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<th>Course Name</th>
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<tr>
<td>ART-109</td>
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<td>ART-110</td>
<td>Introduction to Printmaking</td>
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<tr>
<td>ART-111</td>
<td>Printmaking: Etching</td>
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**sculpture**

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<td>ART-138</td>
<td>Sculpture I</td>
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<tr>
<td>ART-142</td>
<td>Metal Art I</td>
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<tr>
<td>ART-143</td>
<td>Metal Art II</td>
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**total units for the major** 27

**Certificate of achievement Ceramics**

Students completing the program will be able to...

A. identify and apply the formal design elements of art.
B. create original works of ceramic art.
C. create a portfolio demonstrating ideas in a broad range of ceramic techniques.
D. formally compare the attributes of ceramics and other art forms.
E. employ critical thinking to analyze ceramic art works in terms of historical context and cultural values.

A certificate of achievement in ceramics offers a variety of beginning courses within the field of three-dimensional art. The program will introduce both techniques and concepts of ceramics in an academic context. The program requirements are designed for those interested in ceramics as professional practice and provide exposure to the discipline that may help students decide to continue their studies at a four-year institution. The ceramics major is available at UC and CSU systems, the San Francisco Art Institute, the California College of Arts, and at other colleges of art and schools of design.

Students seeking to complete an associate in arts degree in fine arts may choose to supplement that award with a certificate of achievement in ceramics. The fine art curriculum develops students' critical thinking skills, hones problem-solving skills, and establishes visual literacy in the ceramic medium. The ceramics certificate offers technical training related to the commercial ceramic industry and can lead to career opportunities that include: art educator, exhibiting artist, hand-made production potter, ceramic art studio assistant, art therapy intern, creative tile designer, tile producer, mosaic muralist, portrait sculptor, industrial ceramics product designer, industrial ceramics shop manager, ceramic engineering intern, museum or gallery assistant, art dealer, art critic and other professions in creative, hands-on endeavors.
The certificate of achievement has three components. The first component is a core of two required foundations: one introductory drawing/design class and an art history class. The second component is five classes of ceramics (three required, two elective). The third component is one studio art course outside ceramics.

To earn a certificate, students must complete each course with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the certificate.

**Certificate of achievement**

**Painting and drawing**

Students completing the program will be able to...

A. create a portfolio demonstrating ideas in a broad range of painting and drawing techniques.

B. identify the elements that define two-dimensional art.

C. employ critical thinking to analyze two-dimensional art works in terms of historical context and cultural values.

D. demonstrate basic drawing skills, color manipulation, and application of design principles.

E. apply the processes necessary to create drawings in various media and/or paintings in oil, acrylic, and alternative media.

The certificate of achievement in painting and drawing offers a variety of fundamental courses within the field of two-dimensional art. The program will introduce both techniques and concepts of painting and drawing in an academic context. The program requirements are designed for those interested in painting and drawing as a professional practice and may provide preparation for transfer. The requirements for the certificate of achievement in painting and drawing also apply to the associate in arts degree in fine arts. The fine art major in painting and drawing is available at the UC and CSU systems, the San Francisco Art Institute, the California College of the Arts and at other colleges of art and schools of design. Students who wish to transfer must consult with program faculty and college counselors to insure that the requirements for transfer to appropriate institutions are met.

The fine art curriculum develops a student’s critical thinking abilities, hones problem solving skills and establishes visual literacy in the visual arts. Career opportunities that may be enhanced by the certificate of achievement in painting and drawing include: exhibiting artist, muralist, illustrator, graphic designer, art dealer, art critic and other professions in creative endeavors.

To earn the certificate, students must complete each course with “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the certificate.

**Certificate of achievement**

**Printmaking**

Students completing the program will be able to...

A. create a portfolio demonstrating ideas in a broad range of printmaking techniques.

B. create and produce edition art prints from various print media.

C. employ critical thinking to analyze art prints in terms of historical content and cultural values.

D. demonstrate ability to create prints independently and to present professionally.

E. create images suitable for printing.

F. critique their own artwork and the artwork of others.

The certificate of achievement in printmaking includes fundamental courses within the field of printmaking. The program will introduce both techniques and concepts of printmaking in an academic context. The program requirements are designed for those interested in printmaking as professional practice and may provide preparation for transfer. The printmaking major is available at UC and CSU systems, the San Francisco Art Institute, the California College of Arts, and at other colleges of art and schools of design. Students who wish to transfer must consult with program faculty and college counselors to insure that the requirements for transfer to appropriate institutions are met.
Students whose educational goal is the associate in arts in fine arts may choose to supplement the degree with a certificate of achievement in printmaking. The fine arts curriculum develops a student’s critical thinking skills, hones problem-solving skills, and establishes visual literacy in print media. Career opportunities that may be enhanced by the printmaking certificate include: printmaking exhibiting artist, print dealer, printmaking educator, graphic designer, illustrator, internships and paid apprenticeships in print publishers, and work in print shops including those specializing in etching, woodblock, letterpress, monotype, and silk-screen processes.

To earn the certificate, students must complete each course with “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the certificate.

required courses:  
ART-105 Drawing I......................................................... 3  
ARTDM-112 Digital Imaging for the Artist.......................... 3

plus at least 9 units from:  
ART-109 Printmaking: Monotype............................ 3  
ART-110 Introduction to Printmaking....................... 3  
ART-111 Printmaking: Etching I............................... 3  
ART-112 Printmaking: Etching II............................... 3  
ART-114 Printmaking: Woodblock.............................. 3  
ART-116 Printmaking: Stencil and Screen Print............ 3

total minimum required units: 15

Limitations on enrollment

Effective fall term 2013, changes to the regulations that govern community college enrollments placed limitations on the number of courses that students may take in certain disciplines within the Contra Costa Community College District. The charts below indicate which Diablo Valley College (DVC) courses are assigned to groups or courses (“families”) for which limitations have been imposed. Certain courses within certain “families” may be repeated (see catalog description), however, students are limited to four enrollments within the family. Certain DVC courses are equivalent to courses at Los Medanos College and Contra Costa College. An enrollment in an equivalent course at one of those colleges will count toward the allowable four enrollments within the family.

NOTE: Diablo Valley College may offer experimental or topics courses. When appropriate, based on content, such courses will be assigned to a “family” and that enrollment will be counted as an experience within the “family”.

ART

Family: Design
ART-101 Introduction to Two-Dimensional Design  
ART-102 Introduction to Sculpture and Three-Dimensional Design  
ART-103 Visual Theory and Practice - Color Theory

Family: Drawing
ART-105 Drawing I  
ART-106 Drawing II  
ART-107 Figure Drawing I  
ART-108 Figure Drawing II  
ART-250F Advanced Drawing

Family: Printmaking
ART-109 Printmaking: Monotype  
ART-110 Introduction to Printmaking  
ART-111 Printmaking: Etching I  
ART-112 Printmaking: Etching II  
ART-114 Printmaking: Woodblock  
ART-116 Printmaking: Stencil and Screen Print

Family: Painting
ART-120 Watercolor I  
ART-120A Introduction to Watercolor  
ART-120B Watercolor Workshop  
ART-121 Watercolor II  
ART-128 Painting I: Introduction to Painting  
ART-128A Introduction to Oil/Acrylic Painting A  
ART-128B Introduction to Oil/Acrylic Painting B  
ART-127 Painting II: Intermediate Painting  
ART-128 Painting Concepts and Theme Development  
ART-129 Advanced Painting  
ART-130 Figure Painting  
ART-131 Painting and Abstraction

Family: Sculpture
ART-138 Sculpture I  
ART-139 Sculpture II  
ART-141 From Clay to Bronze  
ART-142 Metal Art I  
ART-143 Metal Art II  
ART-144 Metal Casting Techniques I  
ART-145 Metal Casting Techniques II  
ART-150CB From Clay to Bronze  
ART-150WK Woodworking for Sculpture

Family: Applied Art Design
ART-146 Metalsmithing and Jewelry I  
ART-147 Metalsmithing and Jewelry II  
ART-150DC Digital Ceramics Workshop  
ART-150HC Hand-Built Ceramics II  
ART-150LE Metalsmithing and Jewelry III  
ART-150PJ Production Pottery  
ART-150PX Wheel-Thrown Pottery III  
ART-150PY Wheel-Thrown Pottery IV  
ART-152 Wheel-Thrown Pottery I  
ART-153 Wheel-Thrown Pottery II  
ART-154 Hand-Built Ceramics I  
ART-252 Wheel-Thrown Pottery III  
ART-253 Wheel-Thrown Pottery IV  
ART-254 Hand-Built Ceramics II
**Family: Ceramic Art**

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<td>ART-150CR</td>
<td>Ceramic Sculptures II - Surface</td>
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<td>ART-151</td>
<td>Visual Theory and Practice - Ceramic Art</td>
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<td>ART-155</td>
<td>Ceramic Sculpture I</td>
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<td>ART-156</td>
<td>Figurative Ceramics I</td>
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<td>ART-255</td>
<td>Ceramic Sculpture II</td>
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<td>ART-256</td>
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**Family: Photography**

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<td>ART-150PA</td>
<td>Advanced Alternative Photographic Process</td>
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<td>ART-150PK</td>
<td>The Digital Darkroom</td>
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<td>ART-160</td>
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<td>ART-161</td>
<td>Photography II</td>
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<td>ART-163</td>
<td>Documentary Photography</td>
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<td>ART-164</td>
<td>Photographic Portfolio Development</td>
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<tr>
<td>ART-165</td>
<td>Advanced Photographic Portfolio Development</td>
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**ART-101  Introduction to Two-Dimensional Design**

- **3 units**  
  - 36 hours lecture/72 hours laboratory per term  
  - Recommended: Eligibility for ENGL-116/118 or equivalent

This course is a study of theories and applications of two-dimensional design and color in visual art and design. The formal, theoretical, cultural, contemporary, as well as historical elements of two-dimensional design will be explored. C-ID ARTS 100, CSU, UC

**ART-102  Introduction to Sculpture and Three-Dimensional Design**

- **3 units**  
  - 36 hours lecture/72 hours laboratory per term  
  - Recommended: Eligibility for ENGL-116/118 or equivalent

This course is an introduction to the concepts, applications, and historical references related to sculpture and three-dimensional design, including the study of the elements and organizing principles of design as they apply to spatial composition. Students will develop a visual vocabulary for the creative expression through lecture presentations and use of appropriate materials for non-representational three-dimensional studio projects. C-ID ARTS 101, CSU, UC

**ART-103  Visual Theory and Practice - Color Theory**

- **3 units**  
  - 36 hours lecture/72 hours laboratory per term  
  - Recommended: ART-101 or equivalent; eligibility for ENGL-116/118 or equivalent

This is an introductory course that will expose students to a global view of the history of color theory and its application. The art of diverse cultures including Western-European Art, Asian/Middle Eastern Art, Meso-American Art and African Art with a focus on visual theory, aesthetics, criticism and historical context will be examined. Development of critical thinking skills through the analysis of cultural and technological constructs that influence the creation of specific genres will be emphasized. Students will produce original works of art by reinterpreting the traditions they study in a contemporary context. The historical impact of pigments on art and culture will also be explored. CSU, UC

**ART-105  Drawing I**

- **3 units**  
  - 36 hours lecture/72 hours laboratory per term  
  - Prerequisite: ART-105 or equivalent  
  - Recommended: Eligibility for ENGL-116/118 or equivalent  
  - Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This course introduces observational drawing concepts and form-rendering techniques. Basic visual problem solving skills including perceptual drawing and application of compositional principles will be presented. C-ID ARTS 110, CSU, UC

**ART-106  Drawing II**

- **3 units**  
  - 36 hours lecture/72 hours laboratory per term  
  - Prerequisite: ART-105 or equivalent  
  - Recommended: Eligibility for ENGL-116/118 or equivalent

Exploration of artistic concepts, styles, and creative expression related to intermediate-level drawing, focusing on complex subject matter and concepts using a variety of drawing mediums (including color), techniques, and methodologies. Students in this course will build on fundamental drawing skills to develop personalized approaches to content and materials in exercises covering multiple historical and contemporary approaches to drawing. C-ID ARTS 205, CSU, UC

**ART-107  Figure Drawing I**

- **3 units**  
  - 36 hours lecture/72 hours laboratory per term  
  - Recommended: ART-105 or equivalent; eligibility for ENGL-116/118 or equivalent

This course introduces drawing the human figure from live models. Basic human anatomy and its application to figure drawing will be discussed. Pencil, charcoal, and ink techniques will be practiced in the creation of figure drawings. C-ID ARTS 200, CSU, UC
**ART-108**  
**Figure Drawing II**  
3 units  
SC  
- 36 hours lecture/72 hours laboratory per term  
- Prerequisite: ART-107 or equivalent  
- Recommended: Eligibility for ENGL-116/118 or equivalent  
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.  
This course introduces drawing from the human figure with emphasis on mixed media: pastels, gouache, and watercolor. CSU, UC

**ART-109**  
**Printmaking: Monotype**  
3 units  
SC  
- 36 hours lecture/72 hours laboratory per term  
- Recommended: ART-105 or equivalent; eligibility for ENGL-116/118 or equivalent  
- Note: Mandatory materials fee required  
This course is an exploration of monotype (single image) processes utilizing a painterly approach to printmaking. Emphasis will be on traditional and contemporary methods. CSU, UC

**ART-110**  
**Introduction to Printmaking**  
3 units  
SC  
- 36 hours lecture/72 hours laboratory per term  
- Recommended: ART-105 or equivalent; eligibility for ENGL-116/118 or equivalent  
- Note: Mandatory materials fee required  
This course is an introduction to various printmaking techniques including dry point, linoleum cut, monotype, stencil, and collagraph. CSU, UC

**ART-111**  
**Printmaking: Etching I**  
3 units  
SC  
- 36 hours lecture/72 hours laboratory per term  
- Recommended: ART-110 or equivalent; eligibility for ENGL-116/118 or equivalent  
- Note: Mandatory materials fee required  
This course is the study of intaglio printmaking including line etching, aquatint, deepbite, multiple color plates, and photo etching. Projects and discussions further develop students’ understanding of the traditional print media and application of contemporary methods. Projects may include publishing multiple impressions in book arts form. CSU, UC

**ART-112**  
**Printmaking: Etching II**  
3 units  
SC  
- 36 hours lecture/72 hours laboratory per term  
- Prerequisite: ART-111 or equivalent  
- Recommended: Eligibility for ENGL-116/118 or equivalent  
- Note: Mandatory materials fee required  
This course is a continuation of study of the intaglio printmaking including line etching, aquatint, deepbite, multiple color plates, and photo etching. Projects and discussion further develop students’ understanding of the traditional print media and application of contemporary methods. Projects may include publishing multiple impressions in book arts form. CSU, UC

**ART-114**  
**Printmaking: Woodblock**  
3 units  
SC  
- 36 hours lecture/72 hours laboratory per term  
- Recommended: ART-110 or equivalent; eligibility for ENGL-116/118 or equivalent  
- Note: Mandatory materials fee required  
This course focuses on relief printmaking history and methods. Students will build on basic printmaking techniques such as linocut and woodcut and further explore the possibilities of the media through advanced color woodblock and letter press techniques. Various media will be introduced, including multi-plate relief printing, reduction relief printing, wood engraving, and typeface/polymer plate printing. Various printing methods will be introduced including hand printing, etching press, and letter press. CSU, UC

**ART-116**  
**Printmaking: Stencil and Screen Print**  
3 units  
SC  
- 36 hours lecture/72 hours laboratory per term  
- Recommended: ART-110 or equivalent; eligibility for ENGL-116/118 or equivalent  
- Note: Mandatory materials fee required  
The study of stencil methods of printmaking, which are utilized in various fine art media and commercial industries in the contemporary world. Students will learn the principles of stencil through stencil monotype and explore various stencil usages in screen printing, including usage of photo positives and digital imagery. CSU, UC

**ART-120**  
**Watercolor I**  
3 units  
SC  
- 36 hours lecture/72 hours laboratory per term  
- Recommended: ART-105 or equivalent; eligibility for ENGL-116/118 or equivalent  
- Note: ART-120A and 120B combined are equivalent to ART-120  
This course is an introduction to the materials and techniques of watercolor painting with emphasis on learning techniques, problem solving, concept development, and skills demonstration. CSU, UC
ART-120A Introduction to Watercolor
1.5 units SC
- 18 hours lecture/36 hours laboratory per term
- Recommended: Eligibility for ENGL-116/118 or equivalent
- Note: ART-120A is equivalent to the first half of ART-120. ART-120A and 120B combined are equivalent to ART-120.

Emphasis on the study of beginning techniques and materials of watercolor painting. CSU, UC

ART-120B Watercolor Workshop
1.5 units SC
- 18 hours lecture/36 hours laboratory per term
- Recommended: ART-120A or equivalent; eligibility for ENGL-116/118 or equivalent
- Note: ART-120B is equivalent to the second half of ART-120; and ART-120A and 120B combined are equal to ART-120

Emphasis on problem solving concept, development, and skill demonstration in watercolor. CSU, UC

ART-121 Watercolor II
3 units SC
- 36 hours lecture/72 hours laboratory per term
- Prerequisite: ART-120 or equivalent
- Recommended: Eligibility for ENGL-116/118 or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This course is a continuation of the study of watercolor materials and techniques with emphasis on the development of intermediate level skills and concepts required to produce a portfolio of work. CSU, UC

ART-126 Painting I: Introduction to Painting
3 units SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-101, ART-105 and eligibility for ENGL-116/118 or equivalent
- Note: ART-126A and ART-126B combined are equivalent to ART-126.

This beginning level course provides students with an introduction to the materials and techniques of oil and acrylic painting. C-ID ARTS 210, CSU, UC

ART-126A Introduction to Oil/Acrylic Painting A
1.5 units SC
- 18 hours lecture/36 hours laboratory per term
- Recommended: ART-105 or equivalent; eligibility for ENGL-116/118 or equivalent
- Note: ART-126A is equivalent to the first half of ART-126. ART-126A and ART-126B combined are equivalent to ART-126.

Course designed for the student who has had no experience with oil/acrylic painting. The emphasis of the class is on basic painting techniques. Specific assignments are designed to enable students to achieve basic goals. CSU, UC

ART-126B Introduction to Oil/Acrylic Painting B
1.5 units SC
- 18 hours lecture/36 hours laboratory per term
- Recommended: ART-105 or equivalent; ART-126A or equivalent; eligibility for ENGL-116/118 or equivalent
- Note: ART-126B is equivalent to the second half of ART-126. ART-126A and ART-126B combined are equivalent to ART-126.

This course presents painting as a means of communication and the practical study of established styles and techniques. Emphasis will be upon traditional materials and techniques including direct and indirect methods. CSU, UC

ART-127 Painting II: Intermediate Painting
3 units SC
- 36 hours lecture/72 hours laboratory per term
- Prerequisite: ART-126 or equivalent
- Recommended: ART-103 or equivalent; eligibility for ENGL-116/118 or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is an intermediate level painting course that provides students with painting projects designed to further develop painting techniques and problem solving abilities. Principles of critiquing art will also be covered. CSU, UC

ART-128 Painting Concepts and Theme Development
3 units SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-127 or equivalent; eligibility for ENGL-116/118 or equivalent

This course is designed to help students transition to initiating a series of paintings with a unifying theme. Emphasis will be on the development of the artist's content exploration and imagination. Ideas and themes addressing issues of historic, contemporary, and cultural significance in painting will be presented. CSU, UC

ART-129 Advanced Painting
3 units SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-127 or equivalent; eligibility for ENGL-116/118 or equivalent

This course is an advanced-level painting class. Approaches to painting issues concerning subject matter, composition, and expression will be studied. Students will complete a portfolio consisting of a cohesive and thematic series of paintings. CSU, UC
ART-130  Figure Painting
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-107, ART-127 and eligibility for ENGL-116/118 or equivalents

This course is designed to provide students the experience with concepts and media in painting using the human figure as subject matter. The objective of this course is to offer development in the skills and techniques necessary to depict the human figure. CSU, UC

ART-131  Painting and Abstraction
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-127 or equivalent; eligibility for ENGL-116/118 or equivalent

This course is designed to enable advanced students to develop their painting and drawing techniques while focusing on contemporary abstraction and its influence on today's art movements and studio practice. Students will paint using a variety of subjects while focusing on abstraction as the form and style. A survey of historical art movements in abstraction will be presented and their relevance to current painting issues will be discussed. CSU, UC

ART-135  Art Gallery/Museum Management
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: Eligibility for ENGL-116/118 or equivalent

This course is a study of the skills, theories, and practices necessary to prepare works of art for public display. Preparation of artwork, exhibition design, installation, registration, conservation, advertising, and legal issues will be addressed. Students will develop professional skills needed to interact within art and related business environments. Students will apply practical skills in the DVC Art Gallery. CSU

ART-138  Sculpture I
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-102 or equivalent; eligibility for ENGL-116/118 or equivalent

This course concentrates on three-dimensional sculptural principles, techniques, and concepts utilizing a wide range of materials and practices. Various sculpture methods are practiced with attention to creative self-expression with cross-cultural and historical context. CSU, UC

ART-139  Sculpture II
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-102 and ART-138 or equivalents

This course consists of hands on projects that guide students through processes and principles of three dimensional design. Students develop a conceptual dialogue with the instructor, create a portfolio of sculptural work, and practice advanced techniques for sculpture making. CSU, UC

ART-141  From Clay to Bronze
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-102 or equivalent; eligibility for ENGL-116/118 or equivalent
- Note: Mandatory materials fee required

This class explores sculpture from clay to bronze in a variety of traditional and contemporary techniques. Clay modeling and hand building are utilized as a means to create finished cast bronze works. Traditional skills of lost-wax casting and ceramic sculpture are combined with contemporary approaches to sculpture making. CSU

ART-142  Metal Art I
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-102 or equivalent
- Note: Mandatory materials fee required

This course provides an introduction to various metal sculpture processes. Students will apply mold-making techniques for casting bronze, aluminum, and iron objects, as well as basic welded sculpture. Emphasis will be on 3-D design quality and process. CSU

ART-143  Metal Art II
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-102 or equivalent and ART-142 or equivalent
- Note: Mandatory materials fee required

This course provides a continuation of the study of various aspects of metal arts. Intermediate techniques in metal casting of bronze, aluminum, and iron, as well as the fabrication of steel sculpture using the forge, and welding are explored. Emphasis will be on advanced design and technique. The history of traditional and contemporary metal sculpture will also be covered. CSU
ART-144  Metal Casting Techniques I
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-102 or equivalent
- Note: Mandatory materials fee required
This course introduces various aspects of metal sculpture using casting techniques. Moldmaking techniques for castings in bronze, aluminum, and iron are introduced. An in-depth study of traditional and contemporary metal-sculpture processes with an emphasis on 3-D design quality are established. CSU

ART-145  Metal Casting Techniques II
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-102 or equivalent and ART-144 or equivalent
- Note: Mandatory materials fee required
This course expands on foundry casting skills with emphasis on more complex casting projects. The casting process for aluminum, bronze, and/or iron will be thoroughly explored. Advanced mold-making techniques in rubber, Resin-Bonded Sand Molds, Green Sand, Standard Investment molds, and Ceramic Shell molds are covered. Emphasis is added to sustainable studio practice, as well as advanced 3-D design. CSU

ART-146  Metalsmithing and Jewelry I
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-102 or equivalent
- Note: Mandatory materials fee required
This is a beginning course providing skills in basic jewelry and metalsmithing design and hands-on processes. The studio coursework includes the techniques of soldering, cutting, stone setting, bezel work, rolling, chain making, metal forming, and metal finishing. The course further provides a foundation in traditional and contemporary jewelry design and aesthetic forms. CSU

ART-147  Metalsmithing and Jewelry II
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART 102 or equivalent and ART 146 or equivalent
- Note: Mandatory materials fee required
This is an advanced metalsmithing/jewelry course with an emphasis on hands-on processes incorporating individual design, aesthetics, and conceptualization. Further exploration of traditional and contemporary metalsmithing design and aesthetics will be presented. Techniques such as advanced chainmaking, advanced stone setting, forming and raising, chasing, moldmaking, and casting are introduced. CSU

ART-150  Topics in Studio Art
.3-4 units  SC
- Variable hours
- Recommended: Eligibility for ENGL-116/118 or equivalent
This is a supplemental course in studio art topics to provide a study of current concepts and problems in studio art. Specific topics will be announced in the schedule of classes. CSU

ART-151  Visual Theory and Practice in Ceramic Art
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: Eligibility for ENGL-116/118 or equivalent
- Note: Mandatory materials fee required
This introductory course will expose students to a broad spectrum of ceramic art from diverse cultures including Western/European Art, Asian/Middle Eastern Art, Meso-American Art and African Art with a focus on visual theory, aesthetics, criticism and historical context. Students will develop critical thinking skills through the analysis of cultural and technological constructs that influence the creation of specific genres. In addition, with an emphasis on creative problem solving skills, students will produce original works of ceramic art by reinterpreting the traditions they study in a contemporary context. CSU, UC

ART-152  Wheel-Thrown Pottery I
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: Eligibility for ENGL-116/118 or equivalent
- Note: Mandatory materials fee required
This course is an introduction to the creation of ceramic vessels using the potter’s wheel, as well as the development of critical thinking skills through the examination of ceramic art. Through the study of the art of various cultures, the fundamentals of three-dimensional design, and the development of a vocabulary of aesthetic terms and theories, students will engage in both critical discussion and creative application utilizing the potter’s wheel. CSU, UC

ART-153  Wheel-Thrown Pottery II
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-152 or equivalent; eligibility for ENGL-116/118 or equivalent
- Note: Mandatory materials fee required
This intermediate-level, wheel-thrown pottery course focuses on the development of surface treatments. Students will study both form and surface treatments from various western and non-western cultures. Experimentation with a variety of different materials and processes as well as the fundamentals of glaze formulation and mixing will be emphasized. CSU, UC
ART-154  Hand-Built Ceramics I
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: Eligibility for ENGL-116/118 or equivalent
- Note: Mandatory materials fee required

Using functional objects as a starting point, students will learn traditional and contemporary hand-building techniques. This will involve the study of hand-built ceramics from various western and non-western cultures. Students will explore the creative potential of these methods during the construction of original hand-built ceramics. CSU, UC

ART-155  Ceramic Sculpture I
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: Eligibility for ENGL-116/118 or equivalent
- Note: Mandatory materials fee required

This course is an introduction to ceramic sculpture. Its focus is on fundamental techniques and creative strategies to produce ceramic sculpture. This involves the study of sculptural form from various western and non-western cultures and the creation of original works. CSU, UC

ART-156  Figurative Ceramics I
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: Eligibility for ENGL-116/118 or equivalent
- Note: Mandatory materials fee required

This course is an introduction to the fundamental techniques and creative strategies to produce ceramic sculpture based on the human figure. This involves the study of sculptural form from various western and non-western cultures and the creation of original figurative ceramic sculpture based on observations of live models and other sources. CSU, UC

ART-160  Photography I
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Mandatory materials fee required.

This course presents an introduction to black and white film photography offering students a working knowledge of the basics of traditional darkroom photography, including history, theory and practice. Film scanning and digital photography will also be introduced. The technical aspects of photography along with the historical and contemporary role of photography in visual expression, including contributions from diverse cultures will be explored. Class critiques will be used to analyze and discuss photographic images as a form of personal expression and communication. Students will produce a portfolio of photographs. CSU, UC

ART-161  Photography II
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-160 or equivalent; eligibility for ENGL-122 or equivalent
- Note: Mandatory materials fee required.

An intermediate photography class that enhances students’ knowledge of materials and techniques used in traditional black and white and digital photography. The course will concentrate on the specific controls of image processing and the multiple characteristics of a variety of photographic materials. Beyond technique, emphasis will be placed on developing concept, editing, and aesthetic considerations relating to image presentation. CSU, UC

ART-163  Documentary Photography
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-161 or equivalent; eligibility for ENGL-122 or equivalent
- Note: Mandatory materials fee required.

This is an intermediate level course in which students participate in field trips, in-class lectures, demonstrations, critiques, and studio time to develop their own documentary photo essays. The main emphasis will be on documentary photography, its definition, historical precedents, and image making. This course is appropriate for students in art, journalism, and communication. CSU

ART-164  Photographic Portfolio Development
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-161 or equivalent; eligibility for ENGL-122 or equivalent
- Note: Mandatory materials fee required.

Formerly ART-162

This course offers students an opportunity to develop advanced skills using the materials and techniques of traditional and digital photography. Portfolio development and photographic practices will be emphasized. Discussion and critique will be informed by the history of photography and an examination of contemporary art practices. CSU
ART-165  Advanced Photographic Portfolio Development
3 units   SC
  • 36 hours lecture/72 hours laboratory per term
  • Recommended: ART-161 or equivalent; eligibility for ENGL-122 or equivalent
  • Note: Mandatory materials fee required
  • Formerly ART-265
This course is designed to refine the aesthetic vision and visual literacy of the experienced photographer by offering a structured environment to cultivate an individual’s point of view. Students will identify individual aesthetic concerns, define themes and genres as the basis of their creative project, and relate their construction of a personal vision to contemporary and historical creative photography. CSU

ART-250  Projects in Art
.3-.4 units   SC
  • Variable hours
This is a supplemental course in art that provides a study of current concepts and problems in art. Specific topics will be announced in the schedule of classes. CSU

ART-252  Wheel-Thrown Pottery III
3 units   SC
  • 36 hours lecture/72 hours laboratory per term
  • Recommended: ART-152 or equivalent; eligibility for ENGL-116/118 or equivalent
  • Note: Mandatory materials fee required
This intermediate-level, wheel-thrown pottery course focuses on the development of wheel-thrown and altered vessel forms. Emphasis is placed on using wheel-thrown forms as a starting point for more complex structures. The study of vessels from various cultures and the creation of complex forms will be discussed. CSU, UC

ART-253  Wheel-Thrown Pottery IV
3 units   SC
  • 36 hours lecture/72 hours laboratory per term
  • Recommended: ART-152 or equivalent; eligibility for ENGL-116/118 or equivalent
  • Note: Mandatory materials fee required
This intermediate-level, wheel-thrown pottery course focuses on the development of functional pottery forms for the production potter. The study of the art of various cultures, the fundamentals of three-dimensional design, and the development of a vocabulary of aesthetic terms and theories will be addressed. Students will engage in both critical discussion and creative application utilizing the potter’s wheel to develop a line of functional pottery forms. CSU, UC

ART-254  Hand-Built Ceramics II
3 units   SC
  • 36 hours lecture/72 hours laboratory per term
  • Recommended: ART-154 or equivalent; eligibility for ENGL-116/118 or equivalent
  • Note: Mandatory materials fee required
This intermediate-level, hand-built ceramics course focuses on the progressive refinement of hand-built techniques with an emphasis on surface treatment. This involves the study of hand-built forms and surface from various western and non-western cultures and the creation of original hand-built ceramics with an emphasis on developing unique surfaces. CSU, UC

ART-255  Ceramic Sculpture II
3 units   SC
  • 36 hours lecture/72 hours laboratory per term
  • Recommended: ART-155 or equivalent; eligibility for ENGL-116/118 or equivalent
  • Note: Mandatory materials fee required
This intermediate-level, ceramic sculpture course focuses on the progressive refinement of sculpture form with an emphasis on surface treatment. This involves the study of sculptural form and surface from various western and non-western cultures and the creation of original ceramic sculpture with an emphasis on developing unique surfaces. CSU, UC

ART-256  Figurative Ceramics II
3 units   SC
  • 36 hours lecture/72 hours laboratory per term
  • Recommended: ART-156 or equivalent; eligibility for ENGL-116/118 or equivalent
  • Note: Mandatory materials fee required
This intermediate-level, figurative ceramics course focuses on the progressive refinement of figurative sculptural form with an emphasis on surface treatment. This involves the study of figurative sculptural form and surface from various western and non-western cultures. The creation of original figurative ceramic sculpture is based on observations of live models and other sources, with an emphasis on developing unique surfaces. CSU, UC

ART-298  Independent Study
.5-.3 units   SC
  • Variable hours
  • Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU
ART-299  Student Instructional Assistant
.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

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**ART DIGITAL MEDIA – ARTDM**

Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

**Possible career opportunities**

Digital media or graphic design jobs cover all ends of the creative spectrum. Some possible career options include website designer/developer, multimedia designer, computer-graphic artist, animator and cartoonist, interface designer, instructional designer, production artist, video specialist, audio specialist, multimedia programmer, technical writer, informational designer, multimedia company executive, internet consultant, and computer game designer.

**Program-level student learning outcomes**

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

**Associate in arts degree**

**Animation and game design**

Students completing the program will be able to...

A. develop technical proficiency using computer hardware and software appropriate to the animation, game design, or 3D design industry.

B. visually conceptualize in a clear and concise way the artistic direction for a 3D, animation, or game design project.

C. create appropriate typographic solutions for a variety of design situations.

D. articulate, analyze and evaluate the meaning in creative projects, including social contexts and ethical choices.

E. select appropriate tools, materials and processes for a range of media products.

F. work collaboratively within a creative team.

G. develop a professional portfolio of work.

The animation and game design associate in arts degree provides students with a strong foundation in the fundamental aspects of 3D animation and game design. Students will learn the skills to develop 3D animations and game design including techniques such as modeling, animation, texturing, and game engine integration. Courses present material that will take the student through the production process and workflow of 3D animation and game design. Curriculum includes traditional animation techniques, drawing, and the technical fundamentals of 3D animation and game design. The program goal is to provide the skills necessary to enter this growing, professional field.

The types of industries that employ individuals with animation and game design skills include animation for film or television, game design, game development for the web, animation for the web, or assets for game production. Advanced students have the opportunity to create portfolios to prepare for animation and game design careers.

To earn an associate in arts degree with a major in animation and game design, students must complete each course used to meet a major requirement with a “C” grade or higher. Degree requirements can be completed by attending classes in the day, evening, online, or a combination of those. Some courses may satisfy both major and other general education requirements; however, the units are only counted once.

**major requirements:**

<table>
<thead>
<tr>
<th>Course/Title</th>
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<tbody>
<tr>
<td>ART-106  Drawing II</td>
<td>3</td>
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<tr>
<td>ARTDM-140 Motion Graphics</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-160 3D Modeling and Animation I</td>
<td>3</td>
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<tr>
<td>ARTDM-161 3D Modeling and Animation II</td>
<td>3</td>
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<tr>
<td>ARTDM-165 Cartoon Drawing for Digital Animation</td>
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<tr>
<td>ARTDM-175 Digital Animation</td>
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<tr>
<td>ARTDM-180 Introduction to Game Design</td>
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<tr>
<td>ARTDM-181 Intermediate Game Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-214 Introduction to Graphic Design</td>
<td>3</td>
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**plus at least 3 units from:**

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<tbody>
<tr>
<td>ARTDM-105 Introduction to Digital Imaging</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-112 Digital Imaging for the Artist</td>
<td>3</td>
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</table>

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<tbody>
<tr>
<td>ARTHS-197 History of Baroque to 20th Century Art</td>
<td>3</td>
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<tr>
<td>ARTHS-199 Contemporary Art History</td>
<td>3</td>
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<tr>
<td>FTVE-240 History of Broadcasting and Electronic Media</td>
<td>3</td>
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<tr>
<td>ARTDM-149 Fundamentals of Digital Video</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-166 Intermediate Cartoon Drawing for Digital Animation</td>
<td>3</td>
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<tr>
<td>ARTDM-170 Animation and Interactivity</td>
<td>3</td>
</tr>
</tbody>
</table>

**total minimum required units**

36
Art digital media

Associate in arts degree
Art digital media

Students completing the program will be able to...

A. demonstrate an understanding of basic drawing techniques.
B. produce a digital image from scanned or digital photographs.
C. utilize digital images for exports to websites, multimedia presentations, and print.
D. utilize production tools for digital audio for multimedia projects.
E. demonstrate basic techniques for video capture and editing.
F. design a multimedia project.
G. critically evaluate multimedia design techniques and their use in the development of a professional portfolio.
H. qualify for entry-level employment in the art digital media field.

The art digital media associate in arts program prepares students for entry level employment in the digital media industry. This program of study will provide students with the design and technical skills needed for creating non-linear interactive digital media. Students will participate in a collaborative, team-oriented learning experience that mirrors the industry design and production process. Additionally, students will explore career opportunities and develop a professional portfolio for entry into the workforce.

To earn an associate in arts degree, students must complete each course used to meet a major requirement with a "C" grade or higher. Required courses are available in the evening and during the day. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

**major requirements:**

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<td>ARTDM-105</td>
<td>Introduction to Digital Imaging</td>
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<td>ARTDM-115</td>
<td>Digital Interface Design</td>
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<td>ARTDM-117</td>
<td>Digital Illustration</td>
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<td>ARTDM-160</td>
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<tr>
<td>ARTDM-171</td>
<td>Introduction to Web Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-190</td>
<td>Digital Media Projects</td>
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<td>ARTDM-191</td>
<td>Multimedia Portfolio Development</td>
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<td>ARTDM-214</td>
<td>Introduction to Graphic Design</td>
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<td>ARTDM-215</td>
<td>Introduction to Digital Design</td>
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<td>ARTDM-216</td>
<td>Intermediate Cartoon Drawing for Digital Animation</td>
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<td>ARTDM-170</td>
<td>Animation and Interactivity</td>
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<td>ARTDM-175</td>
<td>Digital Animation</td>
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<td>ARTDM-180</td>
<td>Introduction to Game Design</td>
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<td>ARTDM-224</td>
<td>Typography</td>
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<td>BUS-109</td>
<td>Introduction to Business</td>
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<td>BUSMG-191</td>
<td>Small Business Management</td>
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<td>COMSC-110</td>
<td>Introduction to Programming</td>
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<td>FTVE-165</td>
<td>Digital Editing</td>
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<td>FTVE-166</td>
<td>Intermediate Digital Editing</td>
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<tr>
<td>MUSX-172</td>
<td>Introduction to Electronic Music and MIDI</td>
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<tr>
<td>MUSX-173</td>
<td>Advanced Electronic Music</td>
<td>3</td>
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<tr>
<td>MUSX-174</td>
<td>Introduction to Pro Tools</td>
<td>3</td>
</tr>
</tbody>
</table>

**total minimum required units** 36

Associate in arts degree
Graphic design

Students completing the program will be able to...

A. combine appropriate aesthetic form and content to create evocative and engaging work.
B. create appropriate typographic solutions for a variety of design situations.
C. demonstrate proficiency with computers, software and production processes.
D. select appropriate tools, materials and processes for a range of media products.
E. work collaboratively within a creative team.
F. critically evaluate and discuss the merits of various creative ideas.
G. develop a professional portfolio of work.

This degree program provides students with a strong foundation in the fundamental aspects of graphic design and digital art. Students develop creativity and ideation skills, learn the theories of communication design and apply this to a wide range of design situations. The program is hands-on, integrating conceptual design studies with traditional and digital tools and production methods. The program goal is to provide the skills necessary to enter this growing, professional field.

Some examples where students might find employment using their design and illustration skills might include website design and development, design and illustration of electronic magazines and books, design of interactive marketing presentations, interactive learning products, scientific visualizations, etc. Advanced students have the opportunity to complete professional career preparation courses that deal with specific business issues relevant for designers, illustrators, and digital artists.

DVC graphic design students who intend to transfer must consult with a program advisor to select appropriate courses and are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.
To earn an associate in arts degree with a major in graphic design, students must complete each course used to meet a major requirement with a “C” grade or higher. Degree requirements can be completed by attending classes in the day, evening, online or a combination of those. Some courses may satisfy both major and general education requirements; however, the units are only counted once.

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<td>Introduction to Printmaking</td>
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</table>

**Total Minimum Required Units:** 36

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### Certificate of Achievement

#### Animation and Game Design

Students completing the program will be able to...

A. develop technical proficiency using computer hardware and software appropriate to the animation, game design, or 3D design industry.

B. visually conceptualize in a clear and concise way the artistic direction for a 3D, animation, or game design project.

C. create appropriate typographic solutions for a variety of design situations.

D. articulate, analyze and evaluate the meaning in creative projects, including social contexts and ethical choices.

E. select appropriate tools, materials and processes for a range of media products.

F. work collaboratively within a creative team.

G. develop a professional portfolio of work.

The animation and game design certificate of achievement program provides students with a strong foundation in the fundamental aspects of 3D animation and game design. Students will learn the skills to develop 3D animations and game design including techniques such as modeling, animation, texturing, and game engine integration. Courses present material that will take the student through the production process and workflow of 3D animation and game design. Curriculum includes traditional animation techniques, drawing and the technical fundamentals of 3D animation and game design. The program goal is to provide the skills necessary to enter this growing, professional field.

The types of industries that employ individuals with animation and game design skills include animation for film or television, game design, game development for the web, animation for the web, or assets for game production. Advanced students have the opportunity to create portfolios to prepare for animation and game design careers.

To earn a certificate of achievement in animation and game design, students must complete each course used to meet a major requirement with a “C” grade or higher. Certificate requirements can be completed by attending classes in the day, evening, online, or a combination of those.

**Required Courses:**

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<tr>
<td>ARTDM-140</td>
<td>Motion Graphics</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-160</td>
<td>3D Modeling and Animation I</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-161</td>
<td>3D Modeling and Animation II</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-165</td>
<td>Cartoon Drawing for Digital Animation</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-175</td>
<td>Digital Animation</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-180</td>
<td>Introduction to Game Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-181</td>
<td>Intermediate Game Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-214</td>
<td>Introduction to Graphic Design</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus at least 3 units from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTDM-149</td>
<td>Fundamentals of Digital Video</td>
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</tr>
<tr>
<td>ARTDM-166</td>
<td>Intermediate Cartoon Drawing for Digital Animation</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-170</td>
<td>Animation and Interactivity</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Minimum Required Units:** 36
The art digital media program prepares students for entry level employment in one of four specialty areas of the digital media industry: character animation, digital imaging, motion graphics, and web design. This program of study will provide students with the design and technical skills needed for creating non-linear interactive digital media. Students will participate in a collaborative team-oriented learning experience that mirrors the industry design and production process. Additionally, students will explore career opportunities and develop a professional portfolio for entry into the workforce.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available in the evening and during the day.

**Certificate of achievement**

**Graphic design**

Students completing the program will be able to...

A. combine appropriate aesthetic form and content to create evocative and engaging work.
B. create appropriate typographic solutions for a variety of design situations.
C. demonstrate proficiency with computers, software and production processes.
D. select appropriate tools, materials and processes for a range of media products.
E. work collaboratively within a creative team.
F. critically evaluate and discuss the merits of various creative ideas.
G. develop a professional portfolio of work.

This certificate program provides students with a strong foundation in the fundamental aspects of graphic design and digital art. Students develop creativity and ideation skills, learn the theories of communication design and apply this to a wide range of design situations. The program is hands-on, integrating conceptual design studies with traditional and digital tools and production methods. The program goal is to provide the skills necessary to enter this growing, professional field.

Some examples where students might find employment using their design and illustration skills might include website design and development, design and illustration of electronic magazines and books, design of interactive marketing presentations, interactive learning products, scientific visualizations, etc. Advanced students have the opportunity to complete professional career preparation courses that deal with specific business issues relevant for designers, illustrators, and digital artists.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available in the evening and during the day.

**required courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ART-105</td>
<td>Drawing I ...........................................</td>
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<tr>
<td>ARTDM-105</td>
<td>Introduction to Digital Imaging ....................</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-115</td>
<td>Digital Interface Design ................................</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-117</td>
<td>Digital Illustration ..................................</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-140</td>
<td>Motion Graphics ........................................</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-160</td>
<td>3D Modeling and Animation I ..........................</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-171</td>
<td>Introduction to Web Design ................. ........</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-190</td>
<td>Digital Media Projects ................................</td>
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<tr>
<td>ARTDM-191</td>
<td>Multimedia Portfolio Development ..................</td>
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</tr>
<tr>
<td>ARTDM-214</td>
<td>Introduction to Graphic Design ....................</td>
<td>3</td>
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*plus at least 6 units from one of the 4 specialty areas listed below:*

**character animation**

<table>
<thead>
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<th>Course Name</th>
<th>Units</th>
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<tr>
<td>ART-107</td>
<td>Figure Drawing I .....................................</td>
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<tr>
<td>ARTDM-165</td>
<td>Cartoon Drawing for Digital Animation ............</td>
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</tr>
<tr>
<td>ARTDM-166</td>
<td>Intermediate Cartoon Drawing for Digital Animation</td>
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**digital imaging**

<table>
<thead>
<tr>
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<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTDM-112</td>
<td>Digital Imaging for the Artist .....................</td>
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</tr>
<tr>
<td>ARTDM-136</td>
<td>Introduction to Digital Photography ...............</td>
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**motion graphics**

<table>
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<tr>
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<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ARTDM-170</td>
<td>Animation and Interactivity ........................</td>
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</tr>
<tr>
<td>FTVE-165</td>
<td>Digital Editing ........................................</td>
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**web design**

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ARTDM-170</td>
<td>Animation and Interactivity ........................</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-224</td>
<td>Typography .............................................</td>
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**total minimum required units** 36

**required courses:**

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<th>Units</th>
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<tr>
<td>ART-106</td>
<td>Drawing II ...........................................</td>
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<td>ART-110</td>
<td>Introduction to Printmaking ........................</td>
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<tr>
<td>ART-138</td>
<td>Sculpture I ..........................................</td>
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<tr>
<td>ARTDM-117</td>
<td>Digital Illustration ..................................</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-136</td>
<td>Introduction to Digital Photography ...............</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-171</td>
<td>Introduction to Web Design ........................</td>
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</tr>
<tr>
<td>ARTDM-190</td>
<td>Digital Media Projects ................................</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-214</td>
<td>Introduction to Graphic Design ....................</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-224</td>
<td>Typography .............................................</td>
<td>3</td>
</tr>
<tr>
<td>ARTHS-199</td>
<td>Contemporary Art History ................................</td>
<td>3</td>
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*plus at least 3 units from:*

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ARTDM-105</td>
<td>Introduction to Digital Imaging ...................</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-112</td>
<td>Digital Imaging for the Artist .....................</td>
<td>3</td>
</tr>
</tbody>
</table>

**total minimum required units** 36
Certificate of accomplishment
Art digital media - Foundation
Students completing any program will be able to...
A. demonstrate an understanding of basic drawing techniques.
B. produce a digital image from scanned or digital photographs.
C. utilize digital images for exports to websites, multimedia presentations, and print.
D. utilize production tools for digital audio for multimedia projects.
E. demonstrate basic techniques for video capture and editing.
F. design a multimedia project.
G. critically evaluate multimedia design techniques and their use in the development of a professional portfolio.
H. qualify for entry-level employment in the art digital media field.

Art digital media is a set of technologies and techniques that can be used to enhance the presentation of information. Art digital media uses computers to create productions that bring together text, sounds, animation, graphic art and video to educate, inform and entertain. Classes are designed to serve both working professionals who wish to upgrade their skills and students who wish to enter the field.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a "C" grade or higher. Required courses are available in the evening and during the day.

required courses: units
ART-105 Drawing I .................................................. 3
ARTDM-105 Introduction to Digital Imaging ..................... 3
ARTDM-130 Introduction to Digital Audio ......................... 3
ARTDM-148 Fundamentals of Digital Video ....................... 3

plus at least 3 units from:
ARTDM-112 Digital Imaging for the Artist ......................... 3
ARTDM-115 Digital Interface Design .............................. 3
ARTDM-136 Introduction to Digital Photography ................ 3
ARTDM-140 Motion Graphics .................................... 3
ARTDM-160 3D Modeling and Animation I ....................... 3
ARTDM-161 3D Modeling and Animation II ........................ 3
ARTDM-170 Animation and Interactivity ............................ 3
ARTDM-171 Introduction to Web Design ............................ 3
ARTDM-180 Introduction to Game Design .......................... 3
ARTDM-214 Introduction to Graphic Design ....................... 3
FTVE-165 Digital Editing ........................................ 3
FTVE-166 Intermediate Digital Editing ............................ 3
MUSX-172 Introduction to Electronic Music and MIDI .......... 3
MUSX-173 Advanced Electronic Music .............................. 3

total minimum required units 15

ARTDM-100 Introduction to the History and Development of Digital Media
3 units  SC  
- 36 hours lecture/54 hours laboratory per term
- Recommended: ENGL-116/118 or ENGL-117 or equivalent

This course introduces students to digital media through theory and hands-on activities. The history, aesthetics, technology, and social impacts of digital media will be explored. CSU, UC

ARTDM-101 Introduction to the Production of Digital Media
3 units  SC  
- 36 hours lecture/54 hours laboratory per term
- Recommended: ENGL-116/118 or ENGL-117 or equivalent

This course introduces key concepts, technologies, and the creation of digital media. Time-based art, network culture, image resolution, computational techniques, and interactivity will be examined. Students will also explore ways of constructing different types of digital media and investigate the history of digital technology. CSU, UC

ARTDM-105 Introduction to Digital Imaging
3 units  SC  
- 36 hours lecture/54 hours laboratory per term
- Note: This course is equivalent to ARTDM-110 and ARTDM-111 combined. Credit by examination option available.

This course presents design and composition concepts, processes, and aesthetic interpretation of making digital imagery. Students will create computer graphics and edit digital images from scanned photographs and digital photography. CSU, UC

ARTDM-112 Digital Imaging for the Artist
3 units  SC  
- 36 hours lecture/72 hours laboratory per term
- Recommended: ART-105 or equivalent; eligibility for ENGL-116/118 or equivalent

This course is designed to develop a fine arts approach to computer-generated imaging using graphic arts software. An emphasis will be placed on the application and integration of color theory as well as design principles with digital imaging. C-ID ARTS 250, CSU, UC

ARTDM-115 Digital Interface Design
3 units  SC  
- 36 hours lecture/54 hours laboratory per term
- Recommended: ARTDM-105 or equivalent

This introductory course explores current trends and techniques of interface design and design skills. Emphasis is placed on the development of visual solutions for various interactive communication problems, platforms, and devices. CSU, UC
ARTDM-117 Digital Illustration
3 units SC
• 36 hours lecture/54 hours laboratory per term
• Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
This course introduces students to digital illustration. Students will engage in the production of vector graphics suitable for printing and the web. Emphasis will be given to fundamentals of design and composition. Instruction will utilize a variety of software programs including Adobe Illustrator. CSU, UC

ARTDM-130 Introduction to Digital Audio
3 units SC
• 36 hours lecture/54 hours laboratory per term
This is an introductory course about the application of audio to various forms of digital media. The course covers how to capture, edit and create digital audio for a variety of digital media formats including DVD’s, video and the Internet. The course will involve hands-on work with a variety of digital workstations and multimedia software applications. CSU

ARTDM-136 Introduction to Digital Photography
3 units SC
• 36 hours lecture/72 hours laboratory per term
• Recommended: ART-160 or equivalent
• Note: Students must have digital camera with manual functions.
• Note: Mandatory materials fee required
This introductory course focuses on the skills required to create effective digital photographs using digital cameras. Students will be introduced to the fundamental principles of image making, composition, color theory, color management, lighting, image processing, and printing with a specific focus on digital photographic practice in fine art. CSU, UC

ARTDM-140 Motion Graphics
3 units SC
• 36 hours lecture/54 hours laboratory per term
• Recommended: ARTDM-105 or equivalent
This introductory course focuses on the creative design skills required to create effective motion graphics. Students will create motion graphics utilizing digital video and various graphic file formats. The theory and production of animated two-dimensional (2D) graphics for time-based media environments will be introduced, focusing on animating typography, graphic objects, and still images. Various software applications will be used including Adobe After Affects. CSU, UC

ARTDM-149 Fundamentals of Digital Video
3 units SC
• 36 hours lecture/54 hours laboratory per term
This introductory course covers the application of video to various forms of digital media including how to capture, edit and create digital video for DVD’s and the internet. The course will involve hands-on work with a variety of digital workstations and multimedia software applications. CSU, UC

ARTDM-150 Topics in Digital Media
.5-4 units SC
• Variable hours
A supplemental course in digital media to provide a study of current concepts and problems in digital media. Specific topics will be announced in the schedule of classes. CSU

ARTDM-160 3D Modeling and Animation I
3 units SC
• 36 hours lecture/54 hours laboratory per term
• Recommended: ARTDM-105 or equivalent
This course covers the basic concepts of 3D modeling and animation. The fundamentals of computer geometry are taught by looking at the basic elements that make computer models: Cartesian Space, points, curves, surfaces, nurb, polygons and textures. Students will explore production of three-dimensional computer animation. Modeling, animation, lighting, texture mapping and rendering are introduced. Several hands-on 3D animation projects will be planned, storyboarded, designed, and then produced. CSU, UC

ARTDM-161 3D Modeling and Animation II
3 units SC
• 36 hours lecture/54 hours laboratory per term
• Recommended: ARTDM-160 or equivalent
Building on the skills acquired in 3D Modeling and Animation I, this course will focus on the creation of short animated movies. Students will explore the principles that govern animation and learn techniques for implementing them in 3D. CSU, UC
ARTDM-165 Cartoon Drawing for Digital Animation  
3 units SC  
• 36 hours lecture/54 hours laboratory per term  
• Recommended: ART-105 or equivalent  
• Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree. Credit by examination option available.  
This course will introduce students to the skills necessary to create character animations, script development and story board animations. Students will survey the history of animation and be exposed to the techniques of animated drawing. It is designed to prepare students to develop a particular style of animation in any of a wide variety of other digital media courses. This course is designed as a good companion to and/or preparation for ARTDM-170 and/or ARTDM-160. CSU

ARTDM-166 Intermediate Cartoon Drawing for Digital Animation  
3 units SC  
• 36 hours lecture/54 hours laboratory per term  
• Recommended: ART-165 or equivalent  
• Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.  
This course addresses fluidity of movement, multiple visual perspectives, and creating a unified cast of characters for digital animation. Through a series of projects and experiments we will explore these subjects and discover how to create an animator’s “story bible.” CSU

ARTDM-170 Animation and Interactivity  
3 units SC  
• 36 hours lecture/54 hours laboratory per term  
• Recommended: ARTDM-105 or equivalent  
This course provides an introduction to interactive concepts and techniques for creating animation for the web. Fundamentals of animation and the integration of sound and video elements will be covered. CSU, UC

ARTDM-171 Introduction to Web Design  
3 units SC  
• 36 hours lecture/54 hours laboratory per term  
• Recommended: ARTDM-105 or equivalent  
This introductory course focuses on the essential principles and processes of web design. Students will design and publish effective websites using HTML, cascade style sheets (CSS) and a variety of software tools. CSU

ARTDM-175 Digital Animation  
3 units SC  
• 36 hours lecture/54 hours laboratory per term  
• Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.  
This course will introduce students to 2D digital animation techniques for production animation. This course will follow a basic production pipeline to immerse students in the animation process. Students will compare 3D and 2D techniques and how to mix the two. Students will create and animate their own characters, as well as scenery, props and special effects. Students will be introduced to audio recording for lip-sync and special effects. CSU, UC

ARTDM-180 Introduction to Game Design  
3 units SC  
• 36 hours lecture/54 hours laboratory per term  
• Recommended: ARTDM-105 or equivalent  
This introductory game design course will use common fundamental design strategies to create playable video games. Students will gain an understanding of simple game construction and the conceptual design process of game architecture. No programming skills are required to complete this course. CSU, UC

ARTDM-181 Intermediate Game Design  
3 units SC  
• 36 hours lecture/54 hours laboratory per term  
• Recommended: ARTDM-180 or equivalent  
This intermediate game design course will use fundamental design strategies to create playable video games. Students will gain an understanding of intermediate game construction and the conceptual design process of game architecture. No programming skills are required to complete this course. CSU, UC

ARTDM-190 Digital Media Projects  
3 units SC  
• 36 hours lecture/54 hours laboratory per term  
• Recommended: ART-105, ARTDM-130 and ARTDM-149 or equivalents  
This advanced course is designed for students who are preparing for employment in the digital media industry. Working independently and in teams, students will use a variety of software and design tools to create projects for real-world clients. Students will also create presentations combining a variety of digital media. CSU
ARTDM-191 Multimedia Portfolio Development
3 units SC
- 36 hours lecture/54 hours laboratory per term
- Recommended: ART-105, ARTDM-105, 130, 149 or equivalents

This advanced course is designed for students who are preparing for employment in the multimedia industry. Students will explore multimedia career opportunities and the basic principles of professional portfolio preparation for digital media. Students will have the opportunity to view professional portfolios and present their own portfolios to their class peers. CSU

ARTDM-195 Applied Production for Digital Media
3 units SC
- 36 hours lecture/54 hours laboratory per term
- Recommended: ARTDM-190 or equivalent

This course is designed to give students applied production and business experience with a wide variety of client-driven digital media projects. Working independently and in teams, students will build upon the design, tools, and business skills developed in prior coursework. Students will involve themselves in the production process and create projects to meet client specifications. Students will also be intimately involved with the decision making process for running an independent multimedia business. Projects will vary significantly from term to term as well as within the course of a term. CSU

ARTDM-214 Introduction to Graphic Design
3 units SC
- 36 hours lecture/54 hours laboratory per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
- Note: Mandatory materials fee required

Fundamentals of graphic design including history, theory and practice. Students will use graphic design as a means of communicating ideas in a digital environment. Specific focus will be given to principles of design, balance and visual hierarchy; integration of text and image. Students will survey the history of 20th century design as a basis for exploring and understanding graphic design fundamentals. CSU, UC

ARTDM-224 Typography
3 units SC
- 36 hours lecture/54 hours laboratory per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course presents fundamentals of typography including history, theory, and practice, study of letterforms and type design. Emphasis is placed on the vocabulary of typographic form and its relationship to message and purpose. CSU, UC

ARTDM-299 Student Instructional Assistant
.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

ART HISTORY – ARTHS
Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

Possible career opportunities
Students can pursue careers as curators or archivists at the many museums and galleries across the country. Careers in media, advertising, publishing, fashion or design, as well as art therapy, and working with handicapped or disabled people are also open to art history students. Undergraduate art history majors can pursue advanced training in art history, archaeology, architecture, law, library and information science, business, and education.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts in art history for transfer
Students completing any program will be able to...
A. identify, describe, and analyze important artworks and issues from respective historical periods using appropriate art historical vocabulary.
B. employ critical thinking skills in the study of art.
C. describe the intersection of culture, politics, religion, and the arts in specific cultures and time periods.
D. apply the elements and principles of design and aesthetics to create works of art.
E. develop an awareness of various cultural contexts (including language, literature, music, philosophy) in which art is made.
The associate in arts in art history for transfer offers students a curricular program for studying a variety of beginning courses within the field of art history. The art history major is a two-year degree program of transferable courses open to all students. The program requirements are designed for those interested in art history as preparation for transfer. The program is broadly constructed both to prepare students for advanced study in the history of art and to provide a basis for many other fields that require the ability to do independent research, evaluate evidence (visual and textual), and create a coherent argument.

The major has required components of Western art history, non-Western art, and fundamentals of drawing and design. The studio practice courses are common components of art history degrees, and are necessary to an understanding of the fundamentals of art making, which informs theory and critique. Students also select related electives. Foreign language preparation is recommended as many baccalaureate degrees and most post-baccalaureate programs require proficiency in at least one foreign language.

Fine arts faculty and staff are dedicated to assisting students in exploring job opportunities, internships, and transferring to four-year institutions of higher learning. Students interested in the major must contact DVC counselors and art faculty about program requirements and transferability to specific institutions. The student with an associate in arts in art history for transfer is prepared for upper division work in the major or related fields (humanities, interdisciplinary studies, visual studies) at four-year institutions. The major is available at UC and CSU systems, the San Francisco Art Institute, the California College of Art, and other colleges of art and schools of design. Career opportunities include: art or art history teacher, art conservator, museum curator, art journalist, and other related professions. Career opportunities are also available in galleries, museums, and art organizations. Some career fields will require post-baccalaureate preparation. Students also receive a broad-based liberal arts education that is strong in critical thinking skills, which prepares them for a range of professions.

The associate in arts in art history for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:
- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain of a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSU GE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

### Major Requirements:

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<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
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<td>ARTHS-195</td>
<td>3</td>
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<td>ART-138</td>
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<td>ART-142</td>
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<td>ART-152</td>
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<td>ART-193</td>
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<td>ART-197</td>
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</tbody>
</table>

### Arts and Humanities Courses

#### Third Term French
- Humanities: Ancient Civilizations
- Second Term French

#### Fourth Term French
- French History
- French Literature
- History of Prehistoric and Ancient Art

#### Fifth Term French
- French History
- French Literature
- History of Medieval and Renaissance Art

#### Sixth Term French
- French History
- French Literature
- History of Baroque to 20th Century Art

#### Arts and Humanities Courses

<table>
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<tr>
<th>Course</th>
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<td>ITAL-231</td>
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### Total Minimum Required Units 21
ARTHS-190  Topics in Art History
.3-4 units  SC
• Variable hours
• Recommended: Eligibility for ENGL-116/118 or equivalent
A supplemental course in art history to provide a study of current concepts and problems in art history. Specific topics will be announced in the schedule of classes. CSU

ARTHS-191  Critical Thinking in Visual Studies
3 units  SC
• 54 hours lecture per term
• Prerequisite: ENGL-122 or equivalent
This course explores the power of visual culture including analysis of how visual culture creates and mediates meaning. Emphasis is placed on understanding and using principles of inductive and deductive reasoning as well as on evaluation and creation of argument, persuasion, and criticism of visual culture topics from both visual and textual sources. Students will investigate our rich visual world which includes art, advertisements, illustrations, and many other forms of visual communication that inform and mediate every aspect of our lives. CSU, UC

ARTHS-193  History of Asian Art
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-116/118 or equivalent
This course provides an introduction to major art forms and traditions in Asia from prehistory to the present. Artists, patrons, cultures, religions, and their intersections will be covered. Comparisons will be drawn between the course material and other artistic traditions. C-ID ARTH 130, CSU, UC

ARTHS-195  History of Prehistoric and Ancient Art
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-116/118 or equivalent
A history of Western art from the Paleolithic through the end of the Roman period and the beginning of early Christian art. Archeological and anthropological problems are discussed in relation to the study of art styles. The social and cultural background of ancient civilizations and role of the artist will be considered. ARTHS-195 + ARTHS-196 = C-ID ARTH 110, CSU, UC

ARTHS-196  History of Medieval and Renaissance Art
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
The course presents the history of Western art from the Early Christian Period through the Renaissance. Stylistic changes are related to significant social and cultural changes. Consideration is given to the changing role of the artist, socially, culturally, and within patronage systems. ARTHS-195 + ARTHS-196 = C-ID ARTH 110, CSU, UC

ARTHS-197  History of Baroque to 20th Century Art
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents a history of Western art from the 17th century through major movements of the 20th century. Stylistic changes are related to significant social and cultural changes. Consideration is given to the changing role of the artist. CSU, UC

ARTHS-199  Contemporary Art History
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents a survey of contemporary art in the United States and Europe from 1945 to the present. Recent global trends in art will also be considered. Emphasis is placed on identifying and understanding important contemporary art movements and images, as well as social and political issues that shape the character of art. CSU, UC

ARTHS-299  Student Instructional Assistant
.5-3 units  SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
**ASTRONOMY**

Tish Young, Dean  
Physical Sciences and Engineering Division  
Physical Sciences Building, Room 263

**Possible career opportunities**

Considered a branch of physics, astronomy is really a marriage of the physical sciences from planetary science and atmospheric science, to physics and chemistry. Study in astronomy prepares students for careers in scientific research, systems analysis and engineering, as well as software engineering and development. More than two years of college study is usually required.

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**ASTRO-110  The Visible Universe**

3 units  LR  
- 54 hours lecture per term  
- **Recommended:** MATH-090 and eligibility for ENGL-122 or equivalents

This course covers fundamental concepts in astronomy and observational techniques including selected mathematical concepts used in developing an understanding of celestial motions and coordinate systems and their importance to humanity. The planetarium sky provides students with the opportunity to observe concepts presented in class. CSU, UC (credit limits may apply to UC - see counselor)

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**ASTRO-120  Elementary Astronomy**

3 units  LR  
- 54 hours lecture per term  
- **Recommended:** MATH-090 or MATH-090SP or MATH-090E or one year of high school algebra or equivalent and MATH-114 and eligibility for ENGL-122 or equivalents

This course presents an introduction to an elementary mathematical approach to the solving of problems relating to solar and stellar systems. Properties and evolution of stars and galaxies as well as their role in the evolution of the universe will be the major emphasis. Instrumentation used for and the analysis of electromagnetic radiation will also be discussed. CSU, UC (credit limits may apply to UC - see counselor)

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**ASTRO-128  The Universe for Beginners**

4 units  LR  
- 54 hours lecture/54 hours laboratory per term  
- **Recommended:** MATH-090, and eligibility for ENGL-122 or equivalents

This course provides an overview of our current state of knowledge concerning the universe and the methods astronomers use to arrive at their conclusions. Students will observe the sky and physical phenomena and will solve astronomical problems to solidify their knowledge and skills. The internet will be used extensively. CSU, UC (credit limits may apply to UC - see counselor)

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**ASTRO-130  Astronomy Laboratory**

1 unit  LR  
- 54 hours laboratory per term  
- **Prerequisite:** ASTRO-110 or 120 or equivalent (may be taken concurrently)

The laboratory experience will involve the study of the fundamentals of astronomy and will include investigations of the sun, moon, planets, stars and galaxies. Telescopes and other instruments will be used by students to gather data. Students will analyze data they have collected as well as that collected by others. CSU, UC

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**ASTRO-298  Independent Study**

.5-3 units  SC  
- Variable hours  
- **Note:** Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

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**ASTRO-299  Student Instructional Assistant**

.5-3 units  SC  
- Variable hours  
- **Note:** Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
Diablo Valley College is approved by the California Board of Registered Nurses for continuing education credits (provider #CEP 7992). Biological Science courses that can be used are BIOSC-119, 120, 139, 140 and 146.

Tish Young, Dean
Biological and Health Sciences Division
Physical Sciences Building, Room 263

Possible career opportunities
Completion of the biology program prepares students for advanced study leading to careers in government, industry, or secondary-school teaching. The program also partially satisfies the entrance requirements for medical and dental schools. Career options include: researcher, educator, laboratory technician, botanist, ecologist, and field technician.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Allied health
Students completing any program will be able to...
A. illustrate and analyze chemical bonds and reactions.
B. demonstrate an understanding of the structure and growth of microbes.
C. demonstrate knowledge of the structure and function of the human body.
D. demonstrate knowledge of the structure of the human body including both normal and pathological conditions.

The associate in science degree with a major in allied health is intended for transfer. Students wishing to transfer must consult with a counselor regarding other courses in math, chemistry and physics that may be required by the four-year institution to which they intend to transfer. Students who intend to transfer are advised to select General Education Option 2 (ICETC) or Option 3 (CSU GE) Option 1 (DVC General Education) is not generally advised.

To earn an associate in science degree with a major in allied health, students must complete each course used to meet a major requirement with a “C” grade or higher and complete all general education requirements as listed in the catalog. Major requirements may be taken only on a “for grade” basis. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

**major requirements:**

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<thead>
<tr>
<th>Course</th>
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<tr>
<td>BIOSC-139 Human Anatomy</td>
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<tr>
<td>BIOSC-140 Human Physiology</td>
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<tr>
<td>PLUS at least 4 units from:</td>
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<tr>
<td>BIOSC-119 Fundamentals of Microbiology</td>
<td>4</td>
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<tr>
<td>BIOSC-146 Principles of Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>PLUS at least 4 units from:</td>
<td></td>
</tr>
<tr>
<td>CHEM-107 Integrated Inorganic, Organic and Biological Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHEM-108 Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM-109 Introduction to Organic and Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM-120 General College Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td><strong>total minimum required units</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

Associate in science degree
Biology
Students completing any program will be able to...
A. apply the scientific method of inquiry.
B. illustrate and analyze chemical bonds and reactions.
C. compare and contrast organismal life structures and functions.
D. demonstrate an understanding of the mechanisms and evidence for the theory of evolution.

The associate in science degree with a major in biology is designed as a two-year program that offers a broad general education background and an introduction to the basic principles of biology as well as the supporting knowledge of chemistry needed to fully understand and appreciate biology as specified by the learning objectives of the courses. The courses included in the major are also applicable to further study in the life sciences.
The DVC biology major is intended to transfer. Students wishing to transfer must consult with a counselor regarding other courses in math, chemistry and physics that may be required by the four year institution to which they intend to transfer. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is not generally advised.

To earn an associate in science degree with a major in biology, students must complete each course used to meet a major requirement with a “C” grade or higher and complete all general education requirements as listed in the catalog. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

**major requirements:**
- BIOSC-130 Principles of Cellular and Molecular Biology ........................................5
- BIOSC-131 Principles of Organismal Biology, Evolution and Ecology ........................................5
- CHEM-120 General College Chemistry I ........................................5
- CHEM-121 General College Chemistry II ........................................5

**total minimum required units** 20

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**Associate in science degree**

**Life science**

Students completing any program will be able to...

A. understand and apply the scientific method of inquiry.
B. explain, illustrate and analyze chemical bonds and reactions.
C. discuss the mechanisms and evidence for the theory of evolution.
D. understand the molecular aspects of genetics (Cellular Biology emphasis)
E. discuss interactions of organisms in communities (Field Studies emphasis)
F. demonstrate knowledge of the structure and function of the human body (Health emphasis).

The associate in science degree with a major in life science is designed as a two-year program that offers a broad general education background and an introduction to the basic principles of biology and the supporting knowledge of chemistry needed to fully understand and appreciate biology. Furthermore, courses in three categories of life science are offered from which students select a minimum of twelve units. These categories emphasize I: health science, II: field sciences and III: cellular and molecular biology.

The associate degree in life science is not designed to transfer as major preparation for a baccalaureate degree. DVC life science students who intend to transfer must consult with a program advisor or counselor to ensure that other major preparation courses in math, chemistry, physics and other transfer requirements at the four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.

To earn an associate in science degree with a major in life science, students must complete each course used to meet a major requirement with a “C” grade or higher and complete all general education requirements as listed in the catalog. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

**major requirements:**

- BIOSC-102 Fundamentals of Biological Science with Laboratory ........................................4
- BIOSC-117 Human Biology with Laboratory ........................................4
- BIOSC-130 Principles of Cellular and Molecular Biology ........................................5
- BIOSC-131 Principles of Organismal Biology, Evolution and Ecology ........................................5

**plus at least 4 units from:**
- CHEM-107 Integrated Inorganic, Organic, and Biological Chemistry ........................................5
- CHEM-109 Introduction to Organic and Biochemistry ........................................4
- CHEM-120 General College Chemistry I ........................................5

**plus at least 12 units from the following areas of specialization; with at least 3 units from each area:**

**cellular biology**
- BIOSC-107 Genetics and Evolution ........................................4
- BIOSC-119 Fundamentals of Microbiology ........................................4
- BIOSC-130 Principles of Cellular and Molecular Biology ........................................5
- BIOSC-146 Principles of Microbiology ........................................5

**field studies**
- BIOSC-126 Ecology and Field Biology ........................................4
- BIOSC-131 Principles of Organismal Biology, Evolution and Ecology ........................................5
- BIOSC-161 Fundamentals of Marine Biology ........................................3
- BIOSC-162 Fundamentals of Marine Biology with Laboratory ........................................4
- BIOSC-170 Environmental Science ........................................3
- BIOSC-171 Environmental Science with Laboratory ........................................4
- HORT-148L California Native Plants Laboratory ........................................1
- OCEAN-101 Fundamentals of Oceanography ........................................3
- OCEAN-102 Fundamentals of Oceanography with Laboratory ........................................4

**health**
- BIOSC-120 Introduction to Human Anatomy and Physiology ........................................5
- BIOSC-139 Human Anatomy ........................................5
- BIOSC-140 Human Physiology ........................................5
- NUTRI-160 Nutrition: Science and Applications ........................................3

**total minimum required units** 20
**Biological science**

**Associate in science degree**

**Natural science**

Students completing any program will be able to...

A. understand and apply scientific terminology appropriate for this specific field of life or physical science.

B. understand and apply the method of scientific inquiry appropriate for this specific field of life or physical science.

C. collect and/or analyze laboratory and/or field data appropriate for the specific field of life or physical science.

D. critically evaluate scientific information in various formats.

E. understand the relationship between humans and the physical and/or life sciences.

The associate in science degree in natural science is designed as a two-year program that offers a broad general education background and an introduction to the diverse field of the natural sciences. This degree is an appropriate choice for students who seek breadth in their knowledge of the sciences or for those starting their preparation for a career in elementary education (multi subject), secondary education (single subject), journalism, liberal arts, environmental sciences, etc. Students may transfer to a science-related major or career/technical program or may work in a science-related field.

This degree, however, is not designed to present the complete lower division preparation for a major in a traditional scientific field. DVC natural sciences students who intend to transfer must consult with a program adviser or counselor to ensure that other major preparation courses such as mathematics and other transfer requirements at the four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.

To earn an associate in science degree in natural sciences, students must complete each course used to meet a major requirement with a “C” grade or higher and complete all general education requirements as listed in the catalog. Certain courses may satisfy both major and general education requirements; however the units are only counted once.

**Major requirements - Students will select 18 units total from courses in the biological sciences and physical sciences:**

**biological science**

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<td>BIOSC-101</td>
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<td>BIOSC-102</td>
<td>Fundamentals of Biological Science with Laboratory</td>
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<td>BIOSC-107</td>
<td>Genetics and Evolution</td>
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<td>BIOSC-116</td>
<td>Human Biology</td>
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<td>BIOSC-117</td>
<td>Human Biology with Laboratory</td>
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<tr>
<td>BIOSC-119</td>
<td>Fundamentals of Microbiology</td>
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<td>BIOSC-120</td>
<td>Introduction to Human Anatomy and Physiology</td>
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<td>BIOSC-126</td>
<td>Ecology and Field Biology</td>
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<td>BIOSC-130</td>
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<td>BIOSC-149</td>
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<td>BIOSC-161</td>
<td>Fundamentals of Marine Biology</td>
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<td>BIOSC-162</td>
<td>Fundamentals of Marine Biology with Laboratory</td>
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<td>BIOSC-170</td>
<td>Environmental Science</td>
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<td>BIOSC-171</td>
<td>Environmental Science with Laboratory</td>
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<td>HORT-110</td>
<td>Introduction to Horticulture and Plant Science</td>
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<td>HORT-148L</td>
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<td>NUTRI-160</td>
<td>Nutrition: Science and Applications</td>
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**physical science**

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<td>ASTRO-110</td>
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<tr>
<td>ASTRO-120</td>
<td>Elementary Astronomy</td>
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<tr>
<td>ASTRO-128</td>
<td>The Universe for Beginners</td>
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<tr>
<td>ASTRO-130</td>
<td>Astronomy Laboratory</td>
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<td>ASTRO-298</td>
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<td>CHEM-106</td>
<td>Chemistry for Non-Science Majors</td>
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<tr>
<td>CHEM-107</td>
<td>Integrated Inorganic, Organic, and Biological Chemistry</td>
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<td>CHEM-108</td>
<td>Introductory Chemistry</td>
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<td>CHEM-109</td>
<td>Introduction to Organic and Biochemistry</td>
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<td>CHEM-120</td>
<td>General College Chemistry I</td>
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<td>CHEM-121</td>
<td>General College Chemistry II</td>
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<tr>
<td>CHEM-226</td>
<td>Organic Chemistry I</td>
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<td>CHEM-227</td>
<td>Organic Chemistry II</td>
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<td>CHEM-298</td>
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<td>GEOG-120</td>
<td>Physical Geography</td>
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<td>GEOG-121</td>
<td>Physical Geography Laboratory</td>
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<td>GEOG-125</td>
<td>Introduction to Geographic Information Systems (GIS)</td>
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<td>GEOG-126</td>
<td>Advanced Geographic Information Systems</td>
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<td>GEOG-140</td>
<td>Introduction to Weather</td>
<td>3</td>
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<td>GEOG-141</td>
<td>Introduction to Weather Laboratory</td>
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<tr>
<td>GEOG-160</td>
<td>Introduction to Remote Sensing</td>
<td>4</td>
</tr>
<tr>
<td>GEOG-162</td>
<td>Map Design and Visualization</td>
<td>3</td>
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<td>GEOG-298</td>
<td>Independent Study</td>
<td>0.5-3</td>
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<td>GEOL-120</td>
<td>Physical Geology</td>
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<tr>
<td>GEOL-121</td>
<td>Earth and Life Through Time</td>
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<tr>
<td>GEOL-122</td>
<td>Physical Geology Laboratory</td>
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<tr>
<td>GEOL-124</td>
<td>Earth and Life Through Time Laboratory</td>
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<td>GEOL-125</td>
<td>Geology of California</td>
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<td>GEOL-298</td>
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<tr>
<td>OCEAN-101</td>
<td>Fundamentals of Oceanography</td>
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</tbody>
</table>
### Biological Science

**OCEAN-102** Fundamentals of Oceanography with Laboratory ........................................... 4
**PHYS-110** Elementary Physics ................................................................. 3
**PHYS-111** Physics Laboratory ................................................................. 1
**PHYS-113** Elementary Modern Physics: From Atoms to the Big Bang ................. 3
**PHYS-120** General College Physics I .......................................................... 4
**PHYS-121** General College Physics II .......................................................... 4
**PHYS-124** Calculus Supplement for Physics 120 ......................................... 0.5
**PHYS-125** Calculus Supplement for Physics 121 ......................................... 0.5
**PHYS-129** Introductory Physics for Engineers ............................................. 4
**PHYS-130** Physics for Engineers and Scientists A: Mechanics and Wave Motion .... 4
**PHYS-230** Physics for Engineers and Scientists B: Heat and Electro-Magnetism .... 4
**PHYS-231** Physics for Engineers and Scientists C: Optics and Modern Physics ... 4
**PHYS-SC-112** Fundamentals of Physical Science ......................................... 3
**PHYS-298** Independent Study ..................................................................... 0.5-3

**total minimum units for the major** 18

### Associate in Science in Biology for Transfer

Students completing any program will be able to...

A. apply the scientific method of inquiry using appropriate and effective tools in obtaining, analyzing (including use of statistical procedures and standard techniques in data gathering), and interpreting information including peer-reviewed articles.

B. illustrate and analyze chemical bonds and reactions starting on the level of subatomic particles to the level of large organic molecules.

C. compare and contrast organismal life structures and functions including microorganisms.

D. demonstrate an understanding of the mechanisms and evidence for the theory of evolution.

E. demonstrate the concept of limits and apply limits to real-world problems.

F. solve problems involving rates of change and derivatives, including real-world problems.

G. explain the core concepts in mechanics; forces, motion, momentum and energy.

H. solve simple circuit problems involving electric potential, capacitance and resistance.

The associate in science in biology for transfer degree is designed as a two-year program that offers an introduction to the basic principles of biology as well as the supporting knowledge of chemistry, physics, and mathematics. The associate in science in biology for transfer is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Students must complete each course used to meet a major requirement with a “C” grade or higher. Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate degree. Students are advised that for this major, they may use the IGETC for STEM (Science, Technology, Engineering and Mathematics) pattern. This pattern allows students to complete one course in Area 3A; one course in Area 3B; and two courses in Area 4 from two different disciplines. Some variations in major requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

**required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOSC-130</td>
<td>5</td>
</tr>
<tr>
<td>BIOSC-131</td>
<td>5</td>
</tr>
<tr>
<td>CHEM-120</td>
<td>5</td>
</tr>
<tr>
<td>CHEM-121</td>
<td>5</td>
</tr>
<tr>
<td>MATH-182</td>
<td>4</td>
</tr>
<tr>
<td>MATH-192</td>
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<tr>
<td>PHYS-120</td>
<td>4</td>
</tr>
<tr>
<td>PHYS-121</td>
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<td>PHYS-130</td>
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</tr>
<tr>
<td>BIOSC-146</td>
<td>5</td>
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<tr>
<td>CHEM-226</td>
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<td>MATH-142</td>
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<tr>
<td>PSYCH-101</td>
<td>3</td>
</tr>
</tbody>
</table>

**total minimum required units** 35
Certificate of achievement
Allied health

Students completing any program will be able to...
A. illustrate and analyze chemical bonds and reactions.
B. demonstrate an understanding of the structure and growth of microbes.
C. demonstrate knowledge of the structure and function of the human body.
D. demonstrate knowledge of the structure of the human body including both normal and pathological conditions.

This program prepares the student for entry into some health professional programs or jobs in the medical field that do not require degrees. These courses provide some of the prerequisites for advanced training in the medical field for such occupations as nursing, dental hygiene, physical therapy, occupational therapy, medical laboratory technician, and radiological sciences.

To earn a certificate of achievement, students must complete the required courses with a “C” grade or higher. Course requirements are typically available in the day and evening. Students may also earn an associate in science degree in allied health.

Students who intend to transfer to a four-year program should consult with a counselor regarding course and program requirements.

required courses:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOSC-139 Human Anatomy</td>
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</tr>
<tr>
<td>BIOSC-140 Human Physiology</td>
<td>5</td>
</tr>
<tr>
<td>plus at least 4 units from:</td>
<td></td>
</tr>
<tr>
<td>BIOSC-119 Fundamentals of Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOSC-146 Principles of Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>plus at least 4 units from:</td>
<td></td>
</tr>
<tr>
<td>CHEM-107 Integrated Inorganic, Organic and Biological Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHEM-108 Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM-109 Introduction to Organic and Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM-120 General College Chemistry I</td>
<td>5</td>
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</tbody>
</table>

**total minimum required units 18**

Certificate of achievement
Allied health fundamentals

Students completing any program will be able to...
A. demonstrate an understanding of the structure and growth of microbes.
B. demonstrate knowledge of the structure and function of the human body.
C. demonstrate knowledge of changes in bodily functions as a result of disease and determine the reason for functional changes.
D. analyze chemical reactions.

This program prepares the student for entry into some health professional programs or jobs in the medical field that do not require degrees. These courses provide some of the prerequisites for advanced training in the medical field for such occupations as nursing, dental hygiene, physical therapy, occupational therapy, medical laboratory technician, and radiological sciences.

To earn a certificate of achievement, students must complete the required courses with a “C” grade or higher. Course requirements are typically available in the day and evening. Students may also earn a certificate of achievement in allied health or an associate in science degree in allied health.

Students who intend to transfer to a four-year program should consult with a counselor regarding course and program requirements.

required course:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
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<tr>
<td>BIOSC-120 Introduction to Human Anatomy and Physiology</td>
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<tr>
<td>plus at least 4 units from:</td>
<td></td>
</tr>
<tr>
<td>BIOSC-119 Fundamentals of Microbiology</td>
<td>4</td>
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<tr>
<td>BIOSC-146 Principles of Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>plus at least 4 units from:</td>
<td></td>
</tr>
<tr>
<td>CHEM-107 Integrated Inorganic, Organic and Biological Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHEM-108 Introductory Chemistry</td>
<td>4</td>
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<tr>
<td>CHEM-109 Introduction to Organic and Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM-120 General College Chemistry I</td>
<td>5</td>
</tr>
</tbody>
</table>

**total minimum required units 13**

BIOSC-101 Fundamentals of Biological Science
3 units   SC

- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Students who have successfully completed BIOSC-102 should not enroll in BIOSC-101. Students who have successfully completed BIOSC-102 will not receive credit for BIOSC-101.

In this course students will explore fundamental biological principles including the process of evolution by means of natural selection, cell structure and function, plant and animal growth and development, reproduction, genetics and homeostasis within and among living things, populations and communities. CSU, UC (credit limits may apply to UC - see counselor)
BIOSC-102  **Fundamentals of Biological Science with Laboratory**

4 units  SC  
- 54 hours lecture/54 hours laboratory per term
- **Recommended:** Eligibility for ENGL-122 or equivalent
- **Note:** Students who have successfully completed BIOSC-101 should not enroll in BIOSC-102. Students who have successfully completed BIOSC-101 will not receive credit for BIOSC-102.

In this course students will explore fundamental biological principles including the process of evolution by means of natural selection, cell structure and function, plant and animal growth and development, reproduction, genetics and homeostasis within and among living things, populations and communities. A laboratory component is included that introduces scientific method and experimentation, including data gathering and analysis with a variety of scientific equipment. CSU, UC (credit limits may apply to UC - see counselor).

BIOSC-107  **Genetics and Evolution**

4 units  SC  
- 54 hours lecture/54 hours laboratory per term
- **Recommended:** Eligibility for ENGL-122 or equivalent

This course presents the study of various aspects of genetics and evolution. Topics include cellular reproduction, Mendelian Genetics, DNA structure and function, protein synthesis, gene regulation, biotechnology, genetically-modified organisms and gene therapy as well as an introduction to the process of evolution by means of natural selection and the social implications of these topics. The laboratory component includes an introduction to the scientific method and experimentation including data gathering and analysis with a variety of scientific equipment. Laboratory activities will include manipulating DNA, conducting genetic crosses and constructing cladograms. CSU, UC.

BIOSC-116  **Human Biology**

3 units  SC  
- 54 hours lecture per term
- **Recommended:** Eligibility for ENGL-122 or equivalent
- **Note:** Not open to students who have taken BIOSC-117, 120, 139, or 140

The broad concepts and principles of biology as applied to humans. Topics include human evolution, ecology, human genetics, DNA structure and function, disease factors, nutrition and metabolism, growth and development and a survey of body systems. CSU, UC (credit limits may apply to UC - see counselor).

BIOSC-117  **Human Biology with Laboratory**

4 units  SC  
- 54 hours lecture/54 hours laboratory per term
- **Recommended:** Eligibility for ENGL-122 or equivalent
- **Note:** Not open to students who have taken BIOSC-116, 120, 139, or 140

The basic principles of biology will be covered, especially as they pertain to humans. Topics include cell structure, function and reproduction, human heredity, structure and function of a variety of human organ systems, ecology and evolution. A laboratory component is included that introduces the scientific method and experimentation, including data gathering and analysis with a variety of scientific equipment. CSU, UC (credit limits may apply to UC - see counselor).

BIOSC-119  **Fundamentals of Microbiology**

4 units  SC  
- 54 hours lecture/54 hours laboratory per term
- **Prerequisite:** CHEM-108 or CHEM-109 or CHEM-120 or equivalent
- **Recommended:** High school or college biology or chemistry; eligibility for ENGL-122; and MATH-120 or equivalents

Fundamentals of microbiology with an emphasis on microbiology as it pertains to the allied health professions. Topics include: microscopy, cell structure and function, aseptic technique, culture and control of microbes, metabolism, microbial genetics and biotechnology, medical microbiology and immunology, and microbes in the environment. CSU, UC (credit limits may apply to UC - see counselor).

BIOSC-120  **Introduction to Human Anatomy and Physiology**

5 units  SC  
- 54 hours lecture/54 hours laboratory per term
- **Recommended:** High school or college biology or chemistry and eligibility for ENGL-122 or equivalents

The structure and function of the human body stressing the levels of organization within the body, relationship between structure and function, and importance of maintaining relatively stable internal conditions for health and some health consequences resulting from loss of this stability. Hands-on laboratory work including microscopy, experiments, and dissection (including cadavers) reinforces the lecture material. CSU, UC (credit limits may apply to UC - see counselor).

BIOSC-126  **Ecology and Field Biology**

4 units  SC  
- 54 hours lecture/54 hours laboratory per term
- **Recommended:** Eligibility for ENGL-122 or equivalent

This course is designed for non-majors and presents the principles of ecology, natural selection, speciation and biodiversity. During field laboratories, students will survey the natural history of ecological communities in northern California to identify dominant plant and animal species in each community and explore the influences of the physical environment on the evolutionary adaptations and ecology of the species. Human impacts on ecological systems and conservation issues are explored. CSU, UC.
BIOSC-130 **Principles of Cellular and Molecular Biology**

5 units SC  
- 54 hours lecture/108 hours laboratory per term  
- Prerequisite: CHEM-120 or equivalent  
- Recommended: BIOSC-101 or BIOSC-102 and eligibility for ENGL-122 or equivalents

This course is formed around the universal biological processes of all organismal life with an emphasis on the cellular level of organization and is intended for biology majors or other students with an in-depth interest in the biological sciences. Topics include principles of biomolecules, prokaryotic and eukaryotic cellular morphology and ultrastructure, biochemical pathways (photosynthesis and cellular respiration), enzymes, cellular communication and reproduction, classical and molecular genetics, gene control, embryology, immunology, and selected topics of animal physiology emphasizing homeostatic control mechanisms. The laboratory component focuses on methodologies necessary for analyzing molecular, cellular and genetic problems like microscopy, spectrophotometry, graphing and statistical analysis, as well as recombinant DNA technologies. BIOSC-130+BIOSC-131=C-ID BIOL 135S, CSU, UC.

BIOSC-131 **Principles of Organismal Biology, Evolution and Ecology**

5 units SC  
- 54 hours lecture/108 hours laboratory per term  
- Prerequisite: CHEM-120 (may be taken concurrently) or equivalent  
- Recommended: BIOSC-101 or 102, BIOSC-130 and eligibility for ENGL-122 or equivalents  
- Note: It is strongly recommended to take BIOSC-130 before BIOSC-131. BIOSC-131 requires strong written and oral English language skills.

This course is formed around three main biological principles: evolution, unity/diversity of life, and ecology and is intended for biology majors or other students with an in-depth interest in the biological sciences. The focus is on universal biological processes with emphasis on the whole organism and higher levels of organization. Evidence and mechanisms of evolution and speciation; evolutionary history and diversity of life; structure, function and evolutionary adaptations of organisms (including plants, fungi, animals, and unicellular organisms); general, population and community ecology; ecosystems and environmental concerns are covered. In laboratory, students will explore these themes with hands-on observations, dissections, laboratory activities and field exercises. BIOSC-130+BIOSC-131=C-ID BIOL 135S, CSU, UC.

BIOSC-139 **Human Anatomy**

5 units SC  
- 54 hours lecture/108 hours laboratory per term  
- Recommended: BIOSC-102 and eligibility for ENGL-122 or equivalents

The physical structure of the human body as an integrated unit is studied stressing normal structure and the changes that occur with aging and disease. The course content is appropriate for majors in physical and health education; nursing; physical, occupational and respiratory therapy; paramedical; nurse practitioner and physician assistant programs. Gross anatomy will be studied primarily through cadaver dissection in conjunction with preserved specimens, student self-reference, models and charts. Microscopic anatomy (histology) will be studied mainly through the use of microscope slides. C-ID BIOL 110B, CSU, UC (credit limits may apply to UC - see counselor)

BIOSC-140 **Human Physiology**

5 units SC  
- 54 hours lecture/108 hours laboratory per term  
- Prerequisite: BIOSC-120 or BIOSC-139 or equivalent. CHEM-107, 108, 109 or 120 or one year of high school chemistry or equivalents  
- Recommended: BIOSC-102, eligibility for ENGL-122, and MATH-120 or equivalents  
- Note: This course is primarily intended for Nursing, Allied Health, Dental Hygiene, Kinesiology, and other related majors.

This course presents the essential concepts of physiological mechanisms of the human body. Emphasis will be given to regulatory mechanisms ranging from the cellular level to organ-system level employing chemical, mathematical and physical principles. Topics of study will include physiological principles, function, integration and homeostasis of the human body at the cellular, tissue, organ, organ system and organismal level. Laboratory activities focus on methodologies necessary for the application, analysis and evaluation of major physiological principles using molecular technologies, bioelectronics, computer analysis, and/or live organisms. C-ID BIOL 120B, CSU, UC (credit limits may apply to UC - see counselor)

BIOSC-146 **Principles of Microbiology**

5 units SC  
- 54 hours lecture/108 hours laboratory per term  
- Prerequisite: CHEM-108 or CHEM-109 or CHEM-120 or equivalent  
- Recommended: Eligibility for ENGL-122 and MATH-120 or equivalents

Topics include microscopy, culture of microbes and aseptic technique, control and identification of microbes, bacterial biochemistry, metabolism and physiology, cell structure and function, microbial genetics, recombinant DNA and biotechnology, viruses and their life cycles, immunology, epidemiology and study of select infectious diseases. CSU, UC (credit limits may apply to UC - see counselor)
BIOSC-150  Topics in Biology  
.3-4 units  SC  
• Variable hours  
A supplemental course in biology to provide a study of current concepts and problems in biology and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

BIOSC-161  Fundamentals of Marine Biology  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
• Note: This course does not include a laboratory. Students requiring or wanting a laboratory to accompany this course should enroll in BIOSC-162. Students who have successfully completed BIOSC-162 should not enroll in BIOSC-161. Students who have successfully completed BIOSC-162 will not receive credit for BIOSC-161.  
This course is an introduction to the diversity of marine organisms, the environments in which they live, and the relationships between species and organisms with their environments. Topics will include: the scientific method and its utilization in the marine sciences; properties of the marine environment; marine organisms (including their diversity and evolutionary adaptations; marine ecosystems with a focus on local estuarine and coastal environments; marine ecology) and the sustainable use of marine biological resources. CSU, UC (credit limits may apply to UC - see counselor)

BIOSC-162  Fundamentals of Marine Biology with Laboratory  
4 units  SC  
• 54 hours lecture/54 hours laboratory per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
• Note: Students who have successfully completed BIOSC-161 should not enroll in BIOSC-162. Students who have successfully completed BIOSC-161 will not receive credit for BIOSC-162. This course will include field trips outside of regularly scheduled class time. Formerly BIOSC-160.  
This course is an introduction to marine organisms, marine environments, and the ecological relationships that exist between them. Lecture topics will include: the scientific method and its utilization in the marine sciences; physical, chemical and geological properties of the marine environment; marine organisms (including their taxonomic classification, diversity and evolutionary adaptations); marine ecosystems; marine ecology. Laboratory topics will include: observation and dissection of representative marine organisms; and inquiry based comparison of organisms in different phyla and from different habitats. CSU, UC (credit limits may apply to UC - see counselor)

BIOSC-170  Environmental Science  
3 units  SC  
• 54 hours lecture per term  
• Recommended: BIOSC-101 or 102; eligibility for ENGL-122 or equivalents  
• Note: Students who have successfully completed BIOSC-171 should not enroll in BIOSC-170. Students who have successfully completed BIOSC-171 will not receive credit for BIOSC-170.  
This is an introductory course designed to expose students to environmental science. Human interactions with the environment and their consequences for living and nonliving systems will be examined. Topics will include evolution, ecology, biodiversity, human population dynamics, natural resource use, pollution, environmental degradation, climate change, marine and freshwater resources, and environmental policy. CSU, UC (credit limits may apply to UC - see counselor)

BIOSC-171  Environmental Science with Laboratory  
4 units  SC  
• 54 hours lecture/54 hours laboratory per term  
• Recommended: BIOSC-101 or BIOSC-102 or equivalent; eligibility for ENGL-122 or equivalent  
• Note: Students who have successfully completed BIOSC-170 should not enroll in BIOSC-171. Students who have successfully completed BIOSC-170 will not receive credit for BIOSC-171. Class field trips will be organized to local sites related to course topics.  
This is an introductory course designed to expose students to environmental science. Human interactions with the environment and their consequences for living and nonliving systems will be examined. Topics will include evolution, ecology, biodiversity, human population dynamics, natural resource use, pollution, environmental degradation, climate change, marine and freshwater resources, and environmental policy. The laboratory component will introduce the scientific method, including experimental design, sampling methods, data collection and analysis techniques, as well as representing those data in graphical form. CSU, UC (credit limits may apply to UC - see counselor)

BIOSC-299  Student Instructional Assistant  
.5-3 units  SC  
• Variable hours  
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.  
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
Possible career opportunities - Business

Studies in business prepare students to participate and support the operations of organizations. Careers include supervising and coordinating activities, such as purchasing, budgeting, and recordkeeping. Functional area of management or administration, such as human resources, purchasing, or administrative services are likely focal points of a business professional.

Possible career opportunities - Business management and leadership

Careers in business management/leadership assist administrative functions through teamwork to conduct organizational studies, design systems and procedures, conduct measurement analyses, and prepare operations and procedures reports. Some careers also involve assessing staff requirements, in hiring, training new employees, or participating in human resources processes.

Possible career opportunities - Business marketing

Study in business marketing prepares students for careers in several areas, including brand and product management, professional selling, public relations, advertising and promotions, marketing research, marketing logistics, and nonprofit services. Regardless of whether students plan to become a marketing professional or do something else in business, a basic understanding of marketing is important in preparation for any career.

Possible career opportunities - Office professional

The office professional curriculum enriches the chosen career of all who work in professional office settings, especially those who are employed as an administrative assistant, administrative technician, administrative associate, office manager, office clerk, receptionist, secretary, customer service representative, office coordinator, or typist.

Possible career opportunities - Real estate

Professionals in real estate arrange, support, or coordinate the selling, buying, leasing, of commercial, industrial, or residential property. Careers may include working with homeowner associations, rented or leased housing units, buildings, or land (including rights-of-way). Employees work in real estate offices, or for commercial real estate firms to arrange loans for the purchase of property.

Possible career opportunities - Small business management/Entrepreneurship

Small business managers/entrepreneurs have diverse career duties including, finding financial resources, collecting sales tax, creating computer networks, setting up filing systems, and creating marketing plans. Further, those that select careers in this discipline, identify trends and potential markets for products, direct salespersons, provide guidance and training for new employees, and mitigate compliant and compliance issues.

Possible career opportunities - Wealth management

Careers in wealth management involve advising clients on financial plans using knowledge of tax and investment strategies, securities, insurance, pension plans, and real estate. Duties include assessing clients’ assets, liabilities, cash flow, insurance coverage, tax status, and financial objectives.

Program-level student learning outcomes

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree

Business

Students completing the program will be able to...

A. demonstrate knowledge of business operations, the business organization, and business procedures.

B. analyze and evaluate business situations in the major concentration area (i.e. real estate, wealth management, business marketing, advanced general business, management an

C. apply ethical standards and best practices of social responsibility to business situations.

D. develop communication that presents business information in an organized and clear form.

E. implement technologies to identify business problems and to develop solutions and plans of action.
This curriculum is designed to provide an opportunity for business students to achieve an associate in science degree after completing a series of foundational and more advanced courses in the area of business. Completion of this curriculum will demonstrate commitment to the field and provide comprehensive preparation for employment in business related occupations. This degree is not primarily intended for transfer students and does not include all courses required for transfer. Students who intend to transfer should consider the associate in science degree in business administration for transfer. DVC business students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are also advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.

To earn this associate degree with a major in business, students must satisfactorily complete sixty (60) units of degree applicable coursework with a grade point average of 2.0 (C) or higher. At least 12 units of degree applicable coursework must be earned at DVC. Certain courses may satisfy both major and general education requirements; however, the units are only counted once. Because currency of information is relevant for this employment related degree, all coursework required for the degree major must be completed within ten years of the degree date.

**major requirements:**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BUS-109 Introduction to Business</td>
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<tr>
<td>BUS-250 Business Communications</td>
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<tr>
<td>BUS-294 Business Law</td>
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<tr>
<td>BUSMG-120 Introduction to Management Studies</td>
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**plus at least 3 units from:**

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BUSAC-181 Applied Accounting</td>
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<td>BUSAC-186 Financial Accounting</td>
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**plus at least 9 units from:**

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BUS-105 Business Etiquette</td>
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<td>BUS-145 Business Spreadsheet Applications</td>
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<td>BUS-167 Personal Money Management</td>
</tr>
<tr>
<td>BUS-209 International Business</td>
</tr>
<tr>
<td>BUS-210 Introduction to e-Business</td>
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<tr>
<td>BUS-240 Business Statistics</td>
</tr>
<tr>
<td>BUS-281 Investments</td>
</tr>
<tr>
<td>BUS-291 Wills, Trusts, and Estate Planning</td>
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<tr>
<td>BUSAC-185 QuickBooks Accounting for Business I</td>
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<tr>
<td>BUSAC-187 Managerial Accounting</td>
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<tr>
<td>BUSAC-188 QuickBooks Accounting for Business II</td>
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<tr>
<td>BUSAC-285 Federal Income Taxes – Individuals</td>
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<tr>
<td>BUSMG-121 Practices and Concepts of Supervision</td>
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<tr>
<td>BUSMG-131 Managing Diversity in the Workplace</td>
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<tr>
<td>BUSMG-132 Human Resource Management</td>
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<tr>
<td>BUSMG-191 Small Business Management</td>
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<tr>
<td>BUSMG-192 Entrepreneurship and Venture Management</td>
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<td>BUSMK-158 Professional Selling</td>
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<td>BUSMK-255 Advertising</td>
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<tr>
<td>BUSMK-256 Marketing</td>
</tr>
<tr>
<td>BUSMK-257 Applied Advertising and Promotion</td>
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</tbody>
</table>

**total minimum required units** | 24

**Associate in science in business administration for transfer**

Students completing the program will be able to...

A. develop business communications that present information in an organized and concise manner, using acceptable grammar and language arts.
B. explain the functions of business financial operations and apply them to business case problems.
C. compare and contrast ethical approaches and social responsibility options in business situations.
D. evaluate an existing business and identify the business organization, key business procedures relevant to a specific problem using appropriate technology.

This curriculum is designed to provide an opportunity for the business major to achieve an associate in science degree in business administration while completing the requirements for transfer to a California State University (CSU) or other four-year college or university to earn a bachelor’s degree in business administration. A baccalaureate degree is recommended preparation for those considering professional careers in business. Completion of this curriculum will demonstrate commitment to the field and provide comprehensive preparation for upper-division work.

The associate in science in business for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.
Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

### Business

This curriculum is designed to expand general business knowledge and add depth and breadth in the areas of management and supervision, global business, and statistical arguments and solutions. The program provides development of general principles and skills applicable to all businesses and industries.

To earn the certificate of achievement in advanced general business, students must complete each course with a “C” grade or higher. All coursework required for the certificate must be completed within seven years of the certificate date.

#### Certificate of achievement

**Business - transfer**

Students completing the program will be able to...

A. develop business communications that present information in an organized and concise manner, using acceptable grammar and language arts.

B. explain the functions of business financial operations and apply them to business case problems.

C. compare and contrast ethical approaches and social responsibility options in business situations.

D. evaluate an existing business and identify the business organization, key business procedures relevant to a specific problem using appropriate technology.

This curriculum prepares the student for entry into business related professional programs or jobs that do not require degrees. Certificate requirements provide a strong general business foundation for employment in business administration, accounting, management, marketing, finance, international business, or other business related area. Additionally, it completes most, if not all, of the undergraduate business major requirements for transfer should a student decide to transfer prior to completing all the requirements for the DVC major requirements for transfer should a student decide to complete the lower division general education requirements and transfer to a four-year institution at a later time. This certificate provides a core curriculum for employment in business or for the further study of business.

To earn a certificate of achievement in business-transfer students must complete each course used to meet a certificate requirement with a “C” grade or higher. All coursework required for the certificate must be completed within seven years of the certificate date.

### Business requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-294</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUSAC-186</td>
<td>Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAC-187</td>
<td>Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>ECON-220</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON-221</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>BUS-240*</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH-142*</td>
<td>Elementary Statistics with Probability</td>
<td>4</td>
</tr>
<tr>
<td>MATH-181*</td>
<td>Finite Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>MATH-182*</td>
<td>Calculus for Management, Life Science and Social Science</td>
<td>4</td>
</tr>
<tr>
<td>MATH-192*</td>
<td>Analytic Geometry and Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>BUS-109</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS-145</td>
<td>Business Spreadsheet Applications</td>
<td>2</td>
</tr>
<tr>
<td>BUS-250</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>COMSC-101</td>
<td>Computer Literacy</td>
<td>4</td>
</tr>
</tbody>
</table>

**Plus at least 12 units from:**

- Any BUS course not listed in the core requirements
- Any BUSAC course not listed in the core requirements
- Any BUSMG course not listed in the core requirements
- Any BUSMK course not listed in the core requirements
- Any RE course not listed in the core requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-294*</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUS-250</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>BUS-294</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUSMG-120</td>
<td>Introduction to Management Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total minimum required units** 24

### Certificate of achievement

**Advanced general business**

Students completing the program will be able to...

A. determine how a business decision maximizes the benefit and minimizes the risk for all entities involved.

B. explain the importance of the global environment and how it plays in the overall success of business organizations.

C. explain group dynamics in developing and managing a team and work effectively in teams.

D. analyze and evaluate business situations in the major concentration area (i.e. real estate, wealth management, business marketing, advanced general business, management and leadership studies, and small business management/entrepreneurship), identify business problems, and develop solutions/plans of action.

This curriculum prepares the student for entry into business related professional programs or jobs that do not require degrees. Certificate requirements provide a strong general business foundation for employment in business administration, accounting, management, marketing, finance, international business, or other business related area. Additionally, it completes most, if not all, of the undergraduate business major requirements for transfer should a student decide to transfer prior to completing all the requirements for the DVC associate in arts degree in business-transfer; or decide to complete the lower division general education requirements and transfer to a four-year institution at a later time. This certificate provides a core curriculum for employment in business or for the further study of business.

To earn a certificate of achievement in business-transfer students must complete each course used to meet a certificate requirement with a “C” grade or higher. All coursework required for the certificate must be completed within seven years of the certificate date.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-294*</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUS-250</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>BUS-294</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUSMG-120</td>
<td>Introduction to Management Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

**Plus at least 12 units from:**

- Any BUS course not listed in the core requirements
- Any BUSAC course not listed in the core requirements
- Any BUSMG course not listed in the core requirements
- Any BUSMK course not listed in the core requirements
- Any RE course not listed in the core requirements

**Total minimum required units** 24
required courses: | units
--- | ---
BUSAC-186 Financial Accounting | 4
BUSAC-187 Managerial Accounting | 4
ECON-220 Principles of Macroeconomics | 3
ECON-221 Principles of Microeconomics | 3

plus at least 3 units from:

MATH-182* Calculus for Management, Life Science and Social Science I | 4
MATH-192* Analytic Geometry and Calculus I | 5

plus at least 3 units from:

BUS-240 Business Statistics | 3
MATH 142* Elementary Statistics with Probability | 4

plus at least 3 units from:

BUS-109 Introduction to Business | 3
BUS-294 Business Law | 3

total minimum required units | 23

*The above courses have specific prerequisites. See course description for details.

**Certificate of achievement**

**Business marketing**

Students completing the program will be able to...

A. demonstrate knowledge of business operations, the business organization, and business procedures.

B. determine the demand for products and services offered by a firm and its competitors and identify potential customers.

C. develop pricing strategies with the goal of maximizing the firm’s profits or share of the market while ensuring the firm’s customers are satisfied.

D. participate in product development or monitor trends that indicate the need for new products and services.

E. identify and implement cost-effective distribution channels and promotional mixes.

This curriculum is designed to develop knowledge of sales, advertising, and marketing principles and procedures. Statistical analysis is incorporated into the program as a foundation for working in industry with target markets and data selection.

Students can build a solid foundation in all phases of retailing, merchandising, and management, and are then prepared to work as a salesperson, store manager, merchandiser, account executive, buyer, market researcher, consultant, district manager, or store owner/operator. Some career options may require more than two years of college study.

To earn the certificate of achievement in business marketing, students must complete each course with a “C” grade or higher. All coursework required for the certificate must be completed within seven years of the certificate date.

required courses: | units
--- | ---
BUS-109 Introduction to Business | 3
BUS-210 Statistics | 3
BUS-250 Business Communications I | 3
BUS-294 Business Law | 3
BUSMG-120 Introduction to Management Studies | 3
BUSMK-256 Marketing | 3

plus at least 6 units from:

BUS-209 International Business | 3
BUSMK-185 Professional Selling | 3
BUSMK-255 Advertising | 3
BUSMK-257 Applied Advertising and Promotion | 3
Any RE course | 3

total minimum required units | 24

**Certificate of achievement**

**General business**

Students completing the program will be able to...

A. determine how a business decision maximizes the benefit and minimizes the risk for all entities involved.

B. explain the importance of the global environment and the role it plays in the overall success of business organizations.

C. explain group dynamics in developing and managing a team and work effectively in teams.

This curriculum is designed to provide core business knowledge for obtaining entry-level employment in jobs requiring some general business skills. Course content emphasizes a survey of various business disciplines including marketing, finance and investments, small business/entrepreneurship and real estate. Additionally, the curriculum develops skills in business communications, provides a background in general business law, and introduces management studies.

To earn the certificate of achievement in general business, students must complete each course with a “C” grade or higher. All coursework required for the certificate must be completed within seven years of the certificate date.

required courses: | units
--- | ---
BUS-109 Introduction to Business | 3
BUS-210 Statistics | 3
BUS-250 Business Communications I | 3
BUS-294 Business Law | 3
BUSMG-120 Introduction to Management Studies | 3

total minimum required units | 12
Certificate of achievement
Management and leadership studies
Students completing the program will be able to...
A. integrate basic management theories into supervisory and management functions.
B. investigate current management practices and problems related to human behavior in organizations.
C. differentiate threshold issues involved in the legal, ethical, and social responsibilities of management.
D. summarize measures that can be taken by individuals and organizations to correct organizational problems.

This program benefits students preparing to become managers and supervisors, and it is also valuable for persons already holding these positions.

The management and leadership studies certificate provides career opportunities as an administrative analyst, office manager, small business owner, operations manager, program coordinator, human resources professional, facilities manager, organizational development specialist, branch manager, or shift supervisor.

To earn a certificate of achievement in management and leadership studies, students must complete each course used to meet a certificate requirement with a “C” grade or higher. All coursework required for the certificate must be completed within seven years of the certificate date.

required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-109</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS-250</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>BUS-294</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUSMG-120</td>
<td>Introduction to Management Studies</td>
<td>3</td>
</tr>
<tr>
<td>BUSMG-121</td>
<td>Practices and Concepts of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>BUSMG-131</td>
<td>Managing Diversity in the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>BUSMG-132</td>
<td>Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>BUSMG-226</td>
<td>Group Behavior and Leadership</td>
<td>3</td>
</tr>
<tr>
<td>total minimum required units</td>
<td>24</td>
<td></td>
</tr>
</tbody>
</table>

Course substitutions for program requirements require department chairperson approval. Substitutions are limited to 6 units outside the management department.

Certificate of achievement
Office professional
business information worker

Students completing the program will be able to...
A. apply oral and written communication best practices.
B. evaluate business situations using mathematics and software.
C. demonstrate competency in inter-personal and intra-personal skills.
D. compile and organize business data using business software.

This certificate program prepares students for entry-level positions in small and large business offices requiring support staff such as receptionists, administrative assistants, and general clerical assistance.

Changes occur rapidly in the office information and technology environment; therefore, students should meet with an office professional certificate advisor in the business division to determine elective coursework that will assist them in reaching their personal and professional goals.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher.

All coursework required for the certificate must be completed within seven years of the certificate date.

required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-100</td>
<td>Keyboarding</td>
<td>1</td>
</tr>
<tr>
<td>BUS-101</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>BUS-102</td>
<td>Applied Business Math Calculations</td>
<td>1</td>
</tr>
<tr>
<td>BUS-103</td>
<td>Applied Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUS-109</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS-250</td>
<td>Business Communication</td>
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<tr>
<td>total minimum required units</td>
<td>3</td>
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plus at least 2 units from:

<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>BUS-295</td>
<td>Occupational Work Experience</td>
<td>1-4</td>
</tr>
<tr>
<td>BUS-296</td>
<td>Internship in Occupational Work Experience</td>
<td>1-4</td>
</tr>
</tbody>
</table>

plus at least 3 units from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-115</td>
<td>Microsoft Word – Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-116</td>
<td>Microsoft Excel – Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-117</td>
<td>Microsoft PowerPoint – Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-118</td>
<td>Microsoft Outlook – Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>COMSC-101</td>
<td>Computer Literacy</td>
<td>4</td>
</tr>
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</table>

plus at least 5 units from:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSMG-160</td>
<td>Managing Conflict and Workplace Relationships</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-161</td>
<td>Leading Groups and Teams</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-165</td>
<td>Managing Stress</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-166</td>
<td>Time Management</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-167</td>
<td>Writing and Presenting a Business Plan</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-168</td>
<td>Customer Service</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-170</td>
<td>Effective Oral Presentations</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-173</td>
<td>Intercultural Communication in the Workplace</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-174</td>
<td>Records Management</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-175</td>
<td>Business Ethics</td>
<td>0.5</td>
</tr>
<tr>
<td>total minimum required units</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

Certificate of achievement
Real estate
Students completing the program will be able to...
A. explain the functions of real estate markets, real estate practices, and real estate institutions, and recommend choices for common real estate situations.
B. demonstrate how to calculate the time value of money and evaluate various financing alternatives for real estate investment strategies.
C. evaluate real estate development opportunities in the commercial real estate markets for residential, warehouse, retail, and industrial properties.
D. research and analyze specific case problems related to real estate investment and present solutions.
To earn a certificate of achievement in real estate, students must complete each course used to meet a certificate requirement with a “C” grade or higher. All required courses are available in the evening. All coursework required for the certificate must be completed within seven years of the certificate date.

**required courses:**
- BUS-109 Introduction to Business ........................................... 3
- BUS-250 Business Communications I .................................... 3
- BUS-294 Business Law .......................................................... 3
- BUSMG-120 Introduction to Management Studies .................. 3
- RE-160 Real Estate Principles .................................................. 3
- RE-163 Real Estate Practice ....................................................... 3

**plus at least 6 units from:**
- RE-161 Legal Aspects of Real Estate ..................................... 3
- RE-162 Real Estate Appraisal I .................................................. 3
- RE-164 Real Estate Finance ....................................................... 3
- RE-165 Real Estate Economics .................................................... 3
- RE-166 Escrow Procedures ....................................................... 3
- RE-167 Real Estate Property Management .................................. 3

**total minimum required units** 24

**Certificate of achievement**

**Small business management/entrepreneurship**

Students completing the program will be able to...

A. describe the nature and characteristics of successful small business persons.

B. summarize the responsibilities of small business owners in selecting, motivating, training, and supervising employees.

C. define and give concrete examples of the “Competitive Advantage” concept that a small business must achieve in order to succeed.

D. construct a business plan and essential financial documents for a small business.

This program is designed to prepare students for planning, organizing, and operating a business in wholesaling, retailing, and technology or service trade. The main thrust of the program is on managerial decision making under conditions of uncertainty and fierce competition. Courses involve studying case histories of decision-making issues and using business and management games to simulate the complicated interrelationships of various businesses.

The small business management/entrepreneurship certificate provides a foundation of business competencies and management strategies that will enable students to succeed as an entrepreneur, small business owner, partner, manager, or inventor.

To earn a certificate of achievement in small business management/entrepreneurship, students must complete each course with a “C” grade or higher. All coursework required for the certificate must be completed within seven years of the certificate date.

**required courses:**
- BUS-109 Introduction to Business ........................................... 3
- BUS-250 Business Communications I .................................... 3
- BUS-294 Business Law .......................................................... 3
- BUSMG-120 Introduction to Management Studies .................. 3

**plus at least 3 units from:**
- BUSAC-181 Applied Accounting ............................................ 3
- BUSAC-186 Financial Accounting ............................................ 4

**Certificate of achievement**

**Wealth management**

Students completing the program will be able to...

A. demonstrate knowledge of business operations, the business organization, and business procedures.

B. interview clients to determine clients’ assets, liabilities, cash flow, insurance coverage, tax status, and financial objectives.

C. develop financial plans based on analyses of clients’ financial status, and discuss financial options with client.

This curriculum is designed to provide targeted financial knowledge concerning money management, insurance, wealth accumulation, income taxes, investments, and estate planning for the individual. This is a multi-disciplinary program involving accounting, finance, and law.

To earn the certificate of achievement in wealth management, students must complete each course with a “C” grade or higher. All coursework required for the certificate must be completed within seven years of the certificate date.

**required courses:**
- BUS-109 Introduction to Business ........................................... 3
- BUS-161 Personal Money Management .................................... 3
- BUS-250 Business Communications I .................................... 3
- BUS-281 Investments ............................................................. 3
- BUS-294 Business Law .......................................................... 3
- BUSMG-120 Introduction to Management Studies .................. 3
Business

Certificate of accomplishment

Business essentials

Students completing the program will be able to...

A. apply standard business English to oral and written communication, including grammar, punctuation, mechanics, vocabulary, style and usage.

B. complete business-related mathematical problems with reasonable speed and accuracy, both manually and using calculators and business software.

C. analyze basic business documents and financial statements to detect business problems.

D. interpret a research need, determine the type and scope of information needed, and implement effective research strategies including the Internet.

This certificate of accomplishment provides basic business knowledge and office assistant skills for obtaining entry-level employment in the business office.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher.

<table>
<thead>
<tr>
<th>required courses</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-100 Keyboarding</td>
<td>1</td>
</tr>
<tr>
<td>BUS-101 Business English</td>
<td>3</td>
</tr>
<tr>
<td>BUS-102 Applied Business Math Calculations</td>
<td>1</td>
</tr>
<tr>
<td>plus at least 2 units from:</td>
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</tr>
<tr>
<td>BUS-295 Occupational Work Experience</td>
<td></td>
</tr>
<tr>
<td>Education in BUS</td>
<td>1-4</td>
</tr>
<tr>
<td>BUS-296 Internship in Occupational Work Experience</td>
<td>1-4</td>
</tr>
<tr>
<td>plus at least 4 units from:</td>
<td></td>
</tr>
<tr>
<td>CIS-115 Microsoft Word – Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-116 Microsoft Excel – Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-119 Microsoft Outlook – Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>plus at least 3 units from:</td>
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</tr>
<tr>
<td>BUSMG-160 Managing Conflict and</td>
<td></td>
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<tr>
<td>Workplace Relationships</td>
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<tr>
<td>BUSMG-161 Leading Groups and Teams</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-165 Managing Stress</td>
<td>0.5</td>
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<tr>
<td>BUSMG-166 Time Management</td>
<td>0.5</td>
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<tr>
<td>BUSMG-167 Writing and Presenting a Business Plan</td>
<td>0.5</td>
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<tr>
<td>BUSMG-168 Customer Service</td>
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<tr>
<td>BUSMG-170 Effective Oral Presentations</td>
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<tr>
<td>BUSMG-173 Intercultural Communication in the Workplace</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-174 Records Management</td>
<td>0.5</td>
</tr>
<tr>
<td>BUSMG-175 Business Ethics</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Certificate of accomplishment - Office professional

Students completing the program will be able to...

A. apply standard business English to oral and written communication, including grammar, punctuation, mechanics, vocabulary, style and usage.

B. complete business-related mathematical problems with reasonable speed and accuracy, both manually and using calculators and business software.

C. analyze basic business documents and financial statements to detect business problems.

D. interpret a research need, determine the type and scope of information needed, and implement effective research strategies including the Internet.

This certificate of accomplishment provides basic business knowledge and office assistant skills for obtaining entry-level employment in the business office.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher.

<table>
<thead>
<tr>
<th>required courses</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-100 Keyboarding</td>
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</tr>
<tr>
<td>BUS-101 Business English</td>
<td>3</td>
</tr>
<tr>
<td>BUS-102 Applied Business Math Calculations</td>
<td>1</td>
</tr>
<tr>
<td>plus at least 2 units from:</td>
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</tr>
<tr>
<td>BUS-295 Occupational Work Experience</td>
<td></td>
</tr>
<tr>
<td>Education in BUS</td>
<td>1-4</td>
</tr>
<tr>
<td>BUS-296 Internship in Occupational Work Experience</td>
<td>1-4</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>CIS-115 Microsoft Word – Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-116 Microsoft Excel – Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-119 Microsoft Outlook – Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>plus at least 3 units from:</td>
<td></td>
</tr>
<tr>
<td>BUSMG-160 Managing Conflict and</td>
<td></td>
</tr>
<tr>
<td>Workplace Relationships</td>
<td>0.5</td>
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<tr>
<td>BUSMG-161 Leading Groups and Teams</td>
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<td>BUSMG-165 Managing Stress</td>
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<td>BUSMG-166 Time Management</td>
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<td>BUSMG-167 Writing and Presenting a Business Plan</td>
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<td>BUSMG-168 Customer Service</td>
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<tr>
<td>BUSMG-170 Effective Oral Presentations</td>
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<tr>
<td>BUSMG-173 Intercultural Communication in the Workplace</td>
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<td>BUSMG-174 Records Management</td>
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<tr>
<td>BUSMG-175 Business Ethics</td>
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</tbody>
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total minimum required units 24

total minimum required units 7

total minimum required units 14
BUS-100  Keyboarding
1 unit  SC
• 9 hours lecture/27 hours laboratory per term
• Note: Credit by examination option available.
This course presents the theory and practical applications of touch-typing. Emphasis will also be placed on typing speed and accuracy as well as postural principles to minimize fatigue and prevent injury. CSU

BUS-101  Business English
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
A study of English language from a business perspective involving grammar, punctuation, spelling, business vocabulary, sentence structure, basic business document creation, and the ethics of writing clearly and correctly. CSU

BUS-102  Applied Business Math Calculations
1 unit  SC
• 18 hours lecture per term
• Note: Credit by examination option available.
This course presents basic mathematical problem solving techniques applied to business contexts. Topics include operations with whole numbers, integers, decimals, and fractions as well as basic linear equations using arithmetic operators. CSU

BUS-103  Applied Business Mathematics
3 units  SC
• 54 hours lecture/18 hours laboratory per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course is an examination of key concepts and applications of mathematics to solve business problems. Topics include calculating percentages and commissions, trade and cash discounts, markups and markdowns, banking, payroll, taxes, insurance, simple and compound interest, inventory and turnover, depreciation, analysis of financial statements, international business mathematics applications, stocks and bonds, and annuities. CSU

BUS-105  Business Etiquette
1 unit  SC
• 18 hours lecture per term
• Recommended: ENGL-118 or equivalent
A study of the principles of etiquette for the business professional. Students will engage in professional activities that cover introductions, shaking hands, exchanging business cards, listening, conversational techniques, diplomacy, manners, proximity, telephone/smartphone manners, office equipment and technology etiquette, professional appearance, grooming, gift giving, entertainment, handling social events, business travel, meeting protocol, dining, tipping, showing appreciation, intercultural business etiquette, and online/social media etiquette. CSU

BUS-109  Introduction to Business
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This survey course provides an introduction to the study of the modern business enterprise. Students will examine the role of business in a market economy, survey current business trends and evaluate the global, financial, and social environment in which businesses exist and operate. Moreover, the course will describe the evolution, formation and management of American and international businesses, and provide a basic understanding of various functional areas of business, including economics, marketing, finance, management, human resources, international operations, and business decision-making using information technology. C-ID BUS 110, CSU, UC

BUS-145  Business Spreadsheet Applications
2 units  SC
• 27 hours lecture/27 hours laboratory per term
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply toward the 60 units required for the degree. The laboratory (lab) hours for this course may be offered as face to face lab or online lab. See schedule of classes for specific requirements.
• Formerly BUSIM-145
A business applications course, which uses a foundation of basic spreadsheet skills to emphasize the solving of business problems using a commercial spreadsheet program such as Excel. Business oriented cases and problems will be used to present and reinforce procedures for planning, designing, creating, and preparing worksheets. Preparation of business reports, incorporating graphs and database features, and time saving techniques will also be presented. Development of business problem-solving skills is emphasized. Recommended for employment preparation and upgrading of business skills. CSU

BUS-150  Topics in Business
.3-.4 units  SC
• Variable hours
A supplemental course in business to provide a study of current concepts and problems in business and related subdivisions. Specific topics will be announced in the schedule of classes. CSU
BUS-161  Personal Money Management  
3 units   SC  
• 54 hours lecture per term  
•  Recommended: BUS-103 and eligibility for ENGL-122 or equivalents  
An introductory course for planning and managing individual finances and for money management. Topics will include purchasing decisions, sources of credit, personal tax strategies, budgeting, saving, investing in real estate and securities, insuring personal resources and retirement planning. CSU

BUS-209  International Business  
3 units   SC  
• 54 hours lecture per term  
•  Recommended: BUS-109 and eligibility for ENGL-122 or equivalents  
This course presents an overview of the theories and practices of modern international business. The key functional areas related to global business, including international marketing, finance and management, as well as the political, social, economic and cultural factors that help shape and influence today’s international business environment will be examined. The course culminates with students developing a market entry strategy for a local business to a foreign market. CSU

BUS-210  Introduction to e-Business  
3 units   SC  
• 54 hours lecture per term  
•  Note: Eligibility for ENGL-122 or equivalent  
This course provides an introduction to the modern world of e-business and e-commerce. Topics include e-business models and strategy, e-commerce platforms, multi-channel marketing and advertising, electronic payments and digital currency, security risks as well as important ethical and legal issues in e-business and e-commerce. E-business and e-commerce trends will also be discussed, including peer-to-peer commerce and on-demand service models, business-to-business models, e-marketplaces, global e-business infrastructure and supply chain management, as well as the roles of social networks and mobile platforms. CSU

BUS-240  Business Statistics  
3 units   SC  
• 54 hours lecture/18 hours laboratory per term  
•  Prerequisite: MATH-120 or equivalent  
This course is an introduction to concepts, methods and models employed in reasoning with numbers and in presenting cogent statistical arguments or solutions. Students are introduced to organizational, analytical and inference-making processes, using sample data to graphically and numerically describe samples, including identifying varying levels of measurement possible in variables and their implications for statistical computation and inference-making. The course details how to estimate confidence intervals, test hypotheses and develop projections for inferential purposes in a variety of contexts and disciplines such as business, social science, biology, economics, and health science. Many different probability distributions are covered: poisson, binomial, normal, student t, chi-sq, F-distribution and others. Performing Analysis of Variance (ANOVA), estimating simple and multiple regressions, and making inference from such analysis is a major theme of this course. The use of spreadsheet-based software to compute statistics in large-data applications is an important part of lab work. C-ID MATH 110, CSU, UC (credit limits may apply to UC - see counselor)

BUS-250  Business Communications I  
3 units   SC  
• 54 hours lecture per term  
•  Recommended: BUS-101 and eligibility for ENGL-122 or equivalents  
•  Note: Credit by examination option available.  
This course helps students develop the skills necessary to communicate effectively in a professional business environment. The focus will be on communicating clearly, concisely, considerately, and correctly, both orally and in writing. Students will learn to prepare a variety of business documents, including letters, memos, short reports, and proposals; to use technology to communicate, including email and social media; and to prepare and deliver short, professional oral presentations. The course will also contain an introduction to employment communication, including resumes, application letters, and interview skills. Emphasis throughout the course will be placed on intercultural communication and the ethics of communication. CSU

BUS-261  Investments  
3 units   SC  
• 54 hours lecture per term  
•  Recommended: BUS-109 or equivalent  
This is a comprehensive course that provides an overview of financial markets and financial assets such as stocks, bonds and mutual funds, develops a basic understanding of how to value different financial assets and select investment opportunities, and improves research and analytical skills for better investment decision making. CSU
BUS-291  Wills, Trusts, and Estate Planning
1.5 units  SC
• 27 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents an introduction to the areas of business law concerned with wills, trusts, and estate planning. Living trusts, probate avoidance, joint tenancy, estate taxes, asset control, wills, and durable power of attorney will be examined. Analysis of the applicability of various types of estate planning documents for personal use, how to make health-care decisions, and how to create durable powers of attorney will be addressed. Advanced topics such as planning for incapacity and the use of various types of irrevocable trusts will also be covered. CSU

BUS-294  Business Law
3 units  SC
• 54 hours lecture per term
• Recommended: BUS-109 and eligibility for ENGL-122 or equivalents
This course presents a general overview of the specific areas of the legal environment that affect individuals and businesses with an emphasis on contracts, including the Uniform Commercial Code, Article 2. Legal history, civil procedure, constitutional law, torts, intellectual property, cyber law, criminal law, international law, labor and employment law, and agency will also be covered. C-ID BUS 125, CSU, UC

BUS-295  Occupational Work Experience Education in BUS
1-4 units  SC
• May be repeated three times
• Variable hours
• Note: In order to enroll in BUS-295, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.
BUS-295 is supervised employment that extends classroom learning to the job site and relates to the student’s chosen field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

BUS-296  Internship in Occupational Work Experience Education in BUS
1-4 units  SC
• May be repeated three times
• Variable hours
• Note: In order to enroll in the BUS-296 course, students must be interning or volunteering, register for the course, complete an online Employment Form, and participate in an orientation. The Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.
BUS-296 is a supervised internship in a skilled or professional level assignment in the student’s major field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

BUS-298  Independent Study
.5-3 units  SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

BUS-299  Student Instructional Assistant
.5-3 units  SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
BUSINESS ACCOUNTING – BUSAC

Despina Prapavessi, Dean
Business Division
Math Building, Room 267

Possible career opportunities
Study in accounting prepares students for careers in bookkeeping, private and public accounting, auditing, tax preparation and administration, cost and managerial accounting, financial services, payroll, software systems, corporate governance and financial investigation. Some career options require more than two years of college study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree

Accounting

Students completing the program will be able to...

A. construct basic accounting documents and solve case problems related to the accounting cycle utilizing appropriate technology.
B. analyze existing documents by verifying the accuracy of information for a company and performing necessary reconciliation.
C. evaluate financial data in a business environment and apply ethical business judgment for decision making.

This technical curriculum is designed to provide an opportunity for accounting students to achieve an associate in science degree in accounting after completing a comprehensive series of courses in the area of accounting. Completion of the courses in this program demonstrates commitment to the field of accounting, provides comprehensive preparation for employment in accounting-related occupations, and meets a portion of the educational requirements for the California CPA exam (For additional requirements please go to www.dca.ca.gov/cba).

This degree is not recommended for transfer students and DVC accounting students in this program who intend to transfer should consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are also advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) does not meet requirements for most transfer institutions.

To earn an associate degree with a major in accounting, students must satisfactorily complete a minimum of sixty (60) units of degree applicable coursework with a grade point average of 2.0 (C) or higher. Certain courses may satisfy both major and general education requirements; however, the units are only counted once. All coursework required for the degree major must be completed within seven years of the degree date.

major requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>BUS-145</td>
<td>Business Spreadsheet Applications</td>
<td>2</td>
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<tr>
<td>BUSAC-186</td>
<td>Financial Accounting</td>
<td>4</td>
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<tr>
<td>BUSAC-187</td>
<td>Managerial Accounting</td>
<td>4</td>
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</tbody>
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| plus at least 3 units from:
  | BUS-240   | Business Statistics                              | 3     |
  | BUS-250   | Business Communications I                        | 3     |
  | BUS-295   | Occupational Work Experience                     |       |
  | BUS-294   | Business Law                                     | 3     |
  | BUSAC-282 | Intermediate Accounting I                        | 3     |
  | BUSAC-283 | Auditing                                          | 3     |
  | BUSAC-284 | Cost Accounting                                   | 3     |
  | BUSAC-285 | Federal Income Taxes – Individuals               | 3     |
  | BUSAC-286 | Governmental and Not-For-Profit Accounting       | 3     |
| BUSAC-290  | Corporate Financial Reporting and Financial Statement Analysis | 3     |
| plus at least 12 units from:
  | BUS-289   | International Business                           | 3     |
  | BUS-290   | Business Statistics                              | 3     |
  | BUS-250   | Business Communications I                        | 3     |
  | BUSMG-191 | Small Business Management                        | 3     |
  | BUSMG-192 | Entrepreneurship and Venture Management          | 3     |

total minimum required units 28

Certificate of achievement

Advanced accounting

Students completing the program will be able to...

A. produce accurate financial statements for a company and communicate a company’s financial position.
B. construct basic accounting documents and solve case problems related to the accounting cycle utilizing appropriate technology.
C. analyze existing documents by verifying the accuracy of information for a company and performing necessary reconciliation.
D. compare and contrast the financial information prepared for different types of business entities.
The certificate of achievement in advanced accounting builds on the curriculum in the general accounting certificate program and is designed to add technical depth and analytical skill-set development in the areas of financial accounting, auditing, cost accounting, individual income taxation, governmental and not-for-profit accounting and corporate financial reporting for those students with a solid foundation in general accounting. Subjects in this program prepare students for higher level accounting positions and for taking certification examinations in the field of accounting such as enrolled agent, certified fraud examiner, certified internal auditor, certified public accountant or certified management accountant.

Students are required to obtain a “C” grade or higher in all required courses. At least 25 percent of the units must be completed at DVC. All coursework required for the certificate must be completed within seven years of the certificate date.

**Certificate of achievement**

**Bookkeeping**

Students completing the program will be able to...

A. enter basic accounting transactions into an accounting software program.

B. consolidate accounts on a monthly basis to track business income and expenses.

C. compare and contrast the financial information prepared for different types of business entities.

The certificate program in bookkeeping is designed to provide basic business knowledge for obtaining entry-level employment in jobs requiring bookkeeping and accounting skills. Course content emphasizes small business applications for both a service and merchandising business and includes a solid foundation in bookkeeping principles and the classifying and double-entry recording of financial transactions and preparation of the income statement and balance sheet.

Students are required to obtain a “C” grade or higher in all required courses. At least 25 percent of the units must be completed at DVC. All coursework required for the certificate must be completed within seven years of the certificate date.

**Certificate of achievement**

**General accounting**

Students completing the program will be able to...

A. produce accurate financial statements for a company and communicate a company’s financial position.

B. construct basic accounting documents and solve case problems related to the accounting cycle utilizing appropriate technology.

C. analyze existing documents by verifying the accuracy of information for a company and performing necessary reconciliation.

D. compare and contrast the financial information prepared for different types of business entity.
This entry-level accounting certificate provides students with basic accounting and computer accounting coursework. Completion of the certificate will enable students to apply for entry-level positions in accounting.

Students are required to obtain a “C” grade or higher in all required courses. Certificate courses are offered in a combination of day, evening, weekend and online courses. At least 25 percent of the units must be completed at DVC. All coursework required for the certificate must be completed within seven years of the certificate date.

required courses:  
BUS-145 Business Spreadsheet Applications................. 2
BUSAC-186 Financial Accounting........................................... 4
BUSAC-187 Managerial Accounting................................. 4

plus at least 3 units from:
BUS-240 Business Statistics.............................................. 3
BUS-250 Business Communications I............................. 3
BUS-295 Occupational Work Experience
Education in BUS .......................................................... 1–4
BUSAC-182 Computer Income Tax Preparation-
Individuals ............................................................... 1.5
BUSAC-185 QuickBooks Accounting for Business I......... 1.5
BUSAC-188 QuickBooks Accounting for Business II........ 1.5
BUSAC-190 Payroll Accounting ........................................ 1.5

total minimum required units 13

BUSAC-150 Topics in Business Accounting
3-4 units SC
• Variable hours

A supplemental course in business accounting to provide a study of current concepts and problems in Business Accounting and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

BUSAC-181 Applied Accounting
3 units SC
• 54 hours lecture/18 hours laboratory per term
• Recommended: BUS-185 and eligibility for ENGL-122 or equivalents
• Note: This course is a recommended primer for the BUSAC-186 “business major” transfer course. Credit by examination option available. The laboratory (lab) hours for this course may be offered as face to face lab or online lab. See schedule of classes for specific requirements.

A beginning accounting course that involves a practical approach emphasizing small business applications. This course covers the accounting cycle for a sole proprietorship. Includes journals and ledgers; financial statements; adjusting, correcting, and closing entries; bank reconciliation; payroll; calculations for interest, discounts, sales, and payroll taxes. Also includes an introduction to the use of an accounting software program. CSU

BUSAC-182 Computer Income Tax Return Preparation - Individuals
1.5 units SC
• 18 hours lecture/27 hours laboratory per term
• Recommended: BUSAC-285 and eligibility for ENGL-122 or equivalents
• Note: Course may be repeated when software program changes. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree. The laboratory (lab) hours for this course may be offered as face to face lab or online lab. See schedule of classes for specific requirements.

This is a course that uses a popular tax software program or online filing system to prepare income tax returns for an individual. Topics will include the basic tax formula, filing status, exemptions, dependents and the procedures for creating a taxpayer file and processing income, deductions, credits, capital gains and losses, and business activities to produce a final tax return. CSU

BUSAC-185 QuickBooks Accounting for Business I
1.5 units SC
• 18 hours lecture/27 hours laboratory per term
• Recommended: BUSAC-181 or BUSAC-186 and eligibility for ENGL-122 or equivalents
• Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This is an introductory course in the application of basic accounting knowledge and theory in QuickBooks software. The course content includes sales, invoicing and receivables, payables and purchases, general accounting, financial statements, and end-of-period procedures for a service business. This course builds upon knowledge of bookkeeping principles. CSU

BUSAC-186 Financial Accounting
4 units SC
• 72 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: Students seeking an introduction to bookkeeping techniques should register for the Applied Accounting course, BUSAC-181

A theory and procedures course required for many business administration and accounting majors. Introduction to fundamental financial accounting principles, theory, concepts and procedures as the basis of an information system. Includes the role of financial information in business decisions, basic financial statements and the processes used to prepare these financial statements. C-ID ACCT 110, CSU, UC
BUSAC-187 Managerial Accounting

4 units SC
• 72 hours lecture per term
• Prerequisite: BUSAC-186 or equivalent
A second term theory and procedures course required for many business administration and accounting majors. Emphasis is on fundamental managerial accounting concepts that aid in decision making, performance evaluation, planning and cost control. C-ID ACCT 120, CSU, UC

BUSAC-188 QuickBooks Accounting for Business II

1.5 units SC
• 18 hours lecture/27 hours laboratory per term
• Recommended: BUSAC-185 and eligibility for ENGL-122 or equivalents
• Note: Course may be repeated when software program changes. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree. The laboratory (lab) hours for this course may be offered as face to face lab or online lab. See schedule of classes for specific requirements.
A second level course in computer accounting for business using a recognized software program. Focus will be on developing skills to create a set of records and applications for a merchandising business including sales and receivables, payables and purchases, and end-of-period procedures. Topics will also include payroll and payroll tax reporting and related preparation of employee earnings reports. CSU

BUSAC-190 Payroll Accounting

1.5 units SC
• 27 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course covers payroll accounting functions. Topics include how to calculate wages, determine required employer and employee tax deductions, process payroll, and file required reports. Employment legislation and tax laws that affect payroll will also be covered. CSU

BUSAC-282 Intermediate Accounting I

3 units SC
• 54 hours lecture per term
• Prerequisite: BUSAC-186 or equivalent
• Recommended: BUSAC-187 or equivalent
This upper-level financial accounting course reviews and builds on the foundation material presented in Financial Accounting. Financial accounting reporting issues in association with financial statement preparation and interpretation will also be covered. CSU

BUSAC-283 Auditing

3 units SC
• 54 hours lecture/18 hours laboratory per term
• Prerequisite: BUSAC-186 or equivalent
• Recommended: BUSAC-187 or equivalent
• Note: The laboratory (lab) hours for this course may be offered as face to face lab or online lab. See schedule of classes for specific requirements.
This is an intermediate level course on the role and responsibility of Certified Public Accountants in the audit of publicly traded and private companies. Emphasis is placed on verification of financial statements and internal control of accounting systems and cycles for publicly traded companies in the United States. Coverage focuses on the legal and ethical responsibilities of auditors as mandated by the Securities Acts of 1933 and 1934 and the Sarbanes Oxley Act of 2002. Limited coverage is given to audits and attestations of private companies. Topics include auditing standards, professional ethics, legal liability, audit programs, sampling techniques, and audit reports. CSU

BUSAC-284 Cost Accounting

3 units SC
• 54 hours lecture/18 hours laboratory per term
• Prerequisite: BUSAC-187 or equivalent
• Note: The laboratory (lab) hours for this course may be offered as face to face lab or online lab. See schedule of classes for specific requirements.
This course explores the accountant’s role in the decision-making process. Emphasis is on the determination, collection and analysis of cost information as it relates to planning and control. Job order costing, process costing, standard costing, other current costing methods, analysis of variances and analysis of cost information are included in this course. CSU

BUSAC-285 Federal Income Taxes-Individuals

3 units SC
• 54 hours lecture per term
• Recommended: BUSAC-186 and eligibility for ENGL-122 or equivalents
This course explores the federal tax system. The Internal Revenue Code, regulations, rulings and court cases will be analyzed and applied. This course concentrates on federal income tax law for individuals and includes problem solving, perspectives on tax saving, and tax planning techniques. Introduction to tax preparation software is included. CSU
BUSAC-286 Governmental and Not-For-Profit Accounting
3 units SC
- 54 hours lecture per term
- Prerequisite: BUSAC-186 or equivalent
- Recommended: BUSAC-187 or equivalent
This course presents a study of accounting practices used in governmental units and not-for-profit organizations. Basic characteristics of fund accounting, functions of governmental accounting, budgetary process, financial reporting objectives and issues of reporting and disclosure will also be covered. CSU

BUSAC-290 Corporate Financial Reporting and Financial Statement Analysis
3 units SC
- 54 hours lecture/18 hours laboratory per term
- Prerequisite: BUSAC-282 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: The laboratory (lab) hours for this course may be offered as face to face lab or online lab. See schedule of classes for specific requirements.
This course presents advanced skills in the use of financial statements by providing an overview of financial accounting information for evaluating past performance and predicting future performance of a company. It applies the accounting theory and practice gained in intermediate Accounting to real-life financial statements and disclosure examples. In addition, the course focuses on how business transactions are reported and understanding the implications of business decisions. CSU

BUSAC-299 Student Instructional Assistant
.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

BUSINESS MANAGEMENT – BUSMG

BUSMG-120 Introduction to Management Studies
3 units SC
- 54 hours lecture per term
- Recommended: BUS-109 or equivalent; eligibility for ENGL-122 or equivalent
This course is designed as an introduction to the skills and applications used in modern management practice. Topics may include foundation of management principles, planning, organizing, staffing, directing, controlling, legal, ethical and social responsibilities of management. CSU

BUSMG-121 Practices and Concepts of Supervision
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course provides a real world approach to management practices and concepts. Each of the management functions - planning, organizing, influencing, and controlling - will be explained from the standpoint of how each function interrelates in the management process. Student participation includes a variety of management exercises and case study discussions. CSU

BUSMG-131 Managing Diversity in the Workplace
3 units LR
- 54 hours lecture per term
- Recommended: BUS-109 and eligibility for ENGL-122 or equivalents
This course explores issues relating to the management of workplace diversity - individual, group, and cultural differences. How to recognize, understand, and adapt to these differences in order to create cohesive and productive work units will also be covered in this course. CSU
BUSMG-132 Human Resource Management
3 units SC
• 54 hours lecture per term
• Recommended: BUS-109 and eligibility for ENGL-122 or equivalents
This course is a comprehensive study of human resource management in organizations, including human resource planning; employment legislation; recruitment and selection; training and development; compensation and benefits; performance appraisal and career management; managing labor relations; safety, health, and well-being; and motivation and enhancing performance. The course will explore topics including values, ethical issues, leadership and communication, conflict, work design, and organizational culture. CSU

BUSMG-150 Topics in Management Studies
.3-.4 units SC
• Variable hours
• Recommended: BUS-109 and eligibility for ENGL-122 or equivalents
A supplemental course in business management to provide a study of current concepts and problems in business management. Specific topics will be announced in the schedule of classes. CSU

BUSMG-160 Managing Conflict and Workplace Relationships
.5 unit SC
• 9 hours lecture per term
This course will explore methods to resolve conflict as well as strategies to manage conflict that cannot be resolved. Effective communication techniques will be emphasized. CSU

BUSMG-161 Leading Groups and Teams
.5 unit SC
• 9 hours lecture per term
This course will review research on small group and team interactions, and offer practical tools to better manage intrateam relationships, team projects and team effectiveness. Emphasis is placed on helping teams navigate organizational hazards, so they can focus on productive outcomes. CSU

BUSMG-165 Managing Stress
.5 unit SC
• 9 hours lecture per term
This course will examine the nature of stress and offer students strategies to recognize, adapt, and buffer stressors. CSU

BUSMG-166 Time Management
.5 unit SC
• 9 hours lecture per term
This course will address setting goals and priorities, leveraging resources, monitoring progress, and taking responsibility for outcome in order to maximize the effective use of time. CSU

BUSMG-167 Writing and Presenting a Business Plan
.5 unit SC
• 9 hours lecture per term
In this course students will explore their proposed business, core competencies, competitors, and customers through designing a business plan. Survival tactics will be presented to increase the chances of success in fluctuating business environments. CSU

BUSMG-168 Customer Service
.5 unit SC
• 9 hours lecture per term
This course presents the competencies needed to develop a joint purpose, show compassion, and be generous and trustworthy with customers, co-workers, and external stakeholders. The relationship of customer service skills to career success will be examined. CSU

BUSMG-170 Effective Oral Presentations
.5 unit SC
• 9 hours lecture per term
This course will examine how to analyze an audience, identify intent, and make the most of messages. Students will craft content, design visual aids, and refine nonverbal delivery. CSU

BUSMG-171 Listening and Responding in the Workplace
.5 unit SC
• 9 hours lecture per term
This course provides students with an understanding of how listening skills are part of effective business communication. Active listening techniques will be studied as a strategy to better discern communicated messages. CSU

BUSMG-172 Persuasion in Work Settings
.5 unit SC
• 9 hours lecture per term
In this course effective persuasive techniques will be presented, including how to make a reasonable request, tie facts to benefits, overcome resistance, and accept compromise. CSU

BUSMG-173 Intercultural Communication in the Workplace
.5 unit SC
• 9 hours lecture per term
This course will present individual and cultural factors that affect communication as well as the mores that shape the values, experiences and behavior of others in the workplace. Techniques to prepare students to effectively interact with someone who approaches life from a different world view will be discussed. CSU
BUSMG-174 Business Ethics  
.5 units  SC  
- 9 hours lecture per term  
The course introduces the theory and practice of ethical decision making in the workplace. Topics include ethical theories, ethical dilemma resolution, social responsibility, ethics of whistle-blowing, and ethics and technology. CSU

BUSMG-175 Records Management  
.5 units  SC  
- 9 hours lecture per term  
This course introduces the practical applications of alphabetic, numeric, geographic, and subject filing systems and procedures. Topics include paper and electronic records management, safety, security, and disaster recovery. CSU

BUSMG-191 Small Business Management  
3 units  SC  
- 54 hours lecture per term  
- Recommended: BUS-103, BUS-109; eligibility for ENGL-122 or equivalents  
An introductory course intended for students who want to start a new small business, or are already involved in the ongoing management of an existing small business. Small business owners differ from entrepreneurs in that they often keep their businesses small and do not emphasize rapid growth. A small business is independently owned and operated, and is typically not dominant in its field. This course will cover relevant functional areas such as marketing, finance, and human resources. It will also cover topics unique to small businesses, including managing a family-owned business, becoming a franchisee, and applying for a Small Business Administration (SBA) loan. Students will get hands-on small business management experience by designing their own small businesses and putting together a business plan. CSU

BUSMG-192 Entrepreneurship and Venture Management  
3 units  SC  
- 54 hours lecture per term  
- Recommended: BUS-103, 109; eligibility for ENGL-122 or equivalents  
A course designed for students who want to become entrepreneurs and successfully launch new business ventures. Entrepreneurs’ principle objectives are profitability and growth. They differ from other business owners in that they take more risks, and focus on developing innovative strategic practices and products in high tech and other high growth sectors. This course will cover the process of successfully launching, managing and growing an entrepreneurial firm, emphasizing opportunity recognition and feasibility analysis. It will also cover important topics such as developing an effective business model, protecting intellectual property and obtaining venture capital financing. Students will get hands-on entrepreneurial experience by designing their own entrepreneurial venture and developing a business plan. CSU

BUSMG-226 Group Behavior and Leadership  
3 units  LR  
- 54 hours lecture per term  
- Recommended: BUS-109 and eligibility for ENGL-122 or equivalents  
This course will provide theoretical foundations and practical experiences with group behavior and leadership. Emphasis will be placed on self-awareness in a group setting. The course includes the examination of workforce diversity, motivation, decision-making, and organizational politics. CSU

BUSINESS MARKETING - BUSMK

Despina Prapavessi, Dean  
Business Division  
Math Building, Room 267

Certificate of achievement  
Business Marketing - see BUS

BUSMK-158 Professional Selling  
3 units  SC  
- 54 hours lecture per term  
- Recommended: BUS-109 and eligibility for ENGL-122 or equivalents  
This is a course on the theory and practice of personal selling with a focus on relationship marketing and a concentration on the selling process. This course includes an emphasis on sales strategies, techniques, settings, and skills development in product knowledge, customer analysis, prospecting, presenting, and closing the sale. Team sales presentation are also addressed. CSU

BUSMK-255 Advertising  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
A study of the historical, social, ethical, economic, and regulatory aspects of advertising. The subject evaluates advertising, media, and creative strategies for traditional and electronic markets. Topics include effects of consumer behavior patterns, the client-agency relationship, and the development and evaluation of advertising campaigns. CSU
BUSMK-256 Marketing
3 units SC
- 54 hours lecture per term
- Recommended: BUS-109 and eligibility for ENGL-122 or equivalents
This course is an introduction to marketing functions involved in facilitating the exchange of goods and services. It presents a focus on the analysis of markets; assessment of the marketing environment; formulation of marketing strategy; and development of the marketing mix variables of product, price, promotion, and distribution. Ethical issues will also be considered. CSU

BUSMK-257 Applied Advertising and Promotion
3 units SC
- 54 hours lecture per term
- Recommended: BUSMK-255 and eligibility for ENGL-122 or equivalents
This course provides a comprehensive treatment of advertising and promotion from an integrated marketing communications (IMC) perspective. Students will work in teams to develop an integrated marketing communications plan for an actual product or service offered by a firm or organization. Attention is given to key subjects such as target marketing, market research, media planning, creative strategies, and ethical and legal concerns. Emphasis is placed on creating a cost-effective and measurable plan by blending various promotional tools. CSU

BUSMK-298 Independent Study
.5-3 units SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

BUSINESS REAL ESTATE – RE
Despina Prapavessi, Dean
Business Division
Math Building, Room 267

Certificate of achievement
Real estate - See BUS

RE-150 Topics in Real Estate
.3-4 units SC
- Variable hours
A supplemental course in real estate to provide a study of current concepts and problems in real estate. Specific topics will be announced in the schedule of classes. CSU

RE-160 Real Estate Principles
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Applies toward CA Board of Real Estate continuing education and licensing.
This course provides an introduction to the real estate profession. The course covers real and personal property acquisition, ownership, estates in real property, contracts, deeds, financing, taxes, property transfer, agency and other essential topics. It will also assist persons preparing for the real estate salesperson’s license examination, although it is not specifically or solely designed as a pre-licensing course. CSU

RE-161 Legal Aspects of Real Estate
3 units SC
- 54 hours lecture per term
- Recommended: RE-160 or valid California real estate license and eligibility for ENGL-122 or equivalents
- Note: Applies toward CA Board of Real Estate continuing education and licensing.
This course will provide an overview of California law as it pertains to the practice of real estate. CSU

RE-162 Real Estate Appraisal I
3 units SC
- 54 hours lecture per term
- Recommended: RE-160 or valid California real estate license and eligibility for ENGL-122 or equivalents
- Note: Applies toward CA Department of Real Estate educational requirements for real estate licenses
This is a basic course in real estate valuation with emphasis on residential property. Topics will include definitions and concepts, principles of valuation, and the appraisal process. CSU
RE-163  Real Estate Practice
3 units  SC
- 54 hours lecture per term
- Recommended: Valid California real estate license or RE-160 and eligibility for ENGL-122 or equivalents
- Note: Applies toward the state educational requirements for brokers license

This course is a comprehensive and practical presentation of the knowledge necessary to be effective in the real estate industry. Topics include: techniques of prospecting, listing, selling, financing, purchase agreements, escrow, exchange, and property management. CSU

RE-164  Real Estate Finance
3 units  SC
- 54 hours lecture per term
- Recommended: RE-160 and eligibility for ENGL-122 or equivalents
- Note: Applies toward the state educational requirements for the sales or broker’s license

This course is an overview of real estate finance including conventional, Federal Housing Authority (FHA), Veterans Administration (VA) and non-institutional loans. Other topics include construction, investment, and creative financing. CSU

RE-165  Real Estate Economics
3 units  SC
- 54 hours lecture per term
- Recommended: RE-160 or valid California real estate license or equivalent
- Note: Applies toward CA Board of Real Estate continuing education and licensing.

This course is an overview of economic concepts and theories as they apply to the functioning of real estate markets. Special attention to the role of government and other economic sectors in the observed value and returns on residential and commercial real estate will be observed. CSU

RE-166  Escrow Procedures
3 units  SC
- 54 hours lecture per term
- Recommended: RE-160 or valid California real estate license and eligibility for ENGL-122 or equivalents
- Note: Applies toward CA Board of Real Estate continuing education and licensing.

This course is an overview of the procedures required to complete a valid escrow in order to close a real estate transaction. Technical skills, legal aspects, ethical restrictions, interfacing with financing and real estate agents will be emphasized. Students are introduced to the procedures and practices from the perspective of both the escrow/title insurance company and the real estate licensee. CSU

RE-167  Real Estate Property Management
3 units  SC
- 54 hours lecture per term
- Recommended: RE-160 and eligibility for ENGL-122 or equivalents

This course focuses primarily on managing residential and apartment properties. It also contains information on commercial and business properties. Relevant topics include: acquisition, financing, financial reporting, valuation, maintenance, taxes, insurance, furnishings, and tenant relations. CSU

RE-201  Advanced Real Estate Studies
.3-4 units  SC
- Variable hours
- Note: May serve to satisfy CA DRE continuing education requirement for industry licensees.

A supplemental course in real estate designed to provide a study of current real estate problems or activities. Specific topics to be announced. CSU

Possible career opportunities
Diablo Valley College’s career development courses are designed to provide students with opportunities to explore career fields and become familiar with the skills needed to successfully obtain and maintain employment.

CARER-100  College and Career Readiness I
1.5 units  SC
- 27 hours lecture per term
- Note: Credit by examination option available

This course introduces career exploration and is designed to assist students in making career and post-secondary decisions. Topics will include self-exploration, career and life planning, job search skills, and decision-making strategies. CSU

CARER-101  College and Career Readiness II
1.5 units  SC
- 27 hours lecture per term
- Note: Credit by examination option available

This course introduces college readiness and success skills. In addition, students will explore post-secondary education and career options, budget management, and job search basics. CSU
CARER-110 Career and Life Planning
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
In this course students will learn research strategies to make effective career and major choices, using a variety of techniques to find, retrieve, and evaluate career planning information. Students will use career assessments to identify their preferred work values, interests, skills and personality traits. Research will then focus on the exploration of labor market needs; educational and employment requirements; and career ladders within given professions resulting in an effective educational and job search plan. This course will help students develop psychological soft skills in the domain of human relations such as interpersonal communication, self-esteem and professional confidence, emotional intelligence, conflict resolution, and effective collaboration in team-building skills. CSU, UC (credit limits may apply to UC - see counselor)

CARER-120 Career Assessment
1 unit P/NP
• 18 hours lecture per term
• Note: Testing fee required. Not intended for students who have completed CARER-110
In this course, students will utilize self-assessment inventories to identify individual interests, values, skills and personality types as they relate to college/career and major options. Career development software and related technologies to develop skills to enhance the career exploration process will be utilized. CSU

CARER-130 Career and Major Exploration
1 unit P/NP
• 18 hours lecture per term
• Recommended: CARER-120 or equivalent
This course is designed for students who are undecided about their career and/or educational goals. It includes an introduction to the basic career planning process and computerized information systems that aid in the research of occupational and college major options. CSU

CARER-140 Job Search Strategies
1 unit P/NP
• 18 hours lecture per term
This course prepares students for the employment search process including identification of goals and job skills, how to complete an application, traditional and electronic cover letters and resumes, interviewing techniques, job market research and overview of employee and employer rights. Students will identify and discuss the employability skills most commonly sought by employers. CSU

CARER-150 Topics in Careers
.3-4 units SC
• Variable hours
This course is designed to address topics in career and job search related subjects. Specific topics will be announced in the schedule of classes. CSU

CHEMISTRY – CHEM
Tish Young, Dean
Physical Sciences and Engineering Division
Physical Sciences Building, Room 263

Possible career opportunities
Chemists identify and solve problems by applying logic, scientific thinking, and knowledge of natural laws. Chemistry majors work in educational settings and in government, non-profit charities, or research foundations. Chemists work in manufacturing companies, cosmetic companies, environmental assessment firms, medical laboratories, petroleum companies and pharmaceutical companies. They also can become health administrators, and physicians (all specialties). Many careers require more than two years of college study.

CHEM-106 Chemistry for Non-Science Majors
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Prerequisite: MATH-090 or MATH-090E or MATH-090SP or one year of high school algebra or equivalent
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: This is not a preparatory course for other chemistry courses
This course is designed to develop scientific literacy for non-science majors and to meet the general education requirement for physical science with laboratory. The course places chemistry concepts in a practical context using qualitative and quantitative examples that are encountered in everyday life. Laboratory exercises include hands-on experiments related to concepts covered in lecture. C-ID CHEM 100, CSU, UC (credit limits may apply to UC - see counselor)

CHEM-107 Integrated Inorganic, Organic, and Biological Chemistry
5 units SC
• 72 hours lecture/54 hours laboratory per term
• Prerequisite: MATH-090 or MATH-090E or MATH-090SP or one year of high school algebra or equivalent
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: This course does not fulfill the prerequisite to CHEM-120.
This course is an intensive survey of the fundamentals of chemistry, which explores and applies the topics of inorganic and organic chemistry to biochemistry. This course satisfies the requirements of nursing and other health-care programs that require one term of chemistry. CSU
Chemistry

CHEM-108 Introductory Chemistry
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Prerequisite: MATH-090 or MATH-090E or MATH-090SP or one year of high school algebra or equivalent
• Recommended: Eligibility for ENGL-122 or equivalent

This course is an introduction to the experimental science of chemistry. Using mathematical word problems and chemical terms, the student will have an overview of inorganic chemistry. This course is appropriate for those that have no high school chemistry experience. CSU, UC (credit limits may apply to UC - see counselor)

CHEM-109 Introduction to Organic and Biochemistry
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Prerequisite: CHEM-108 or CHEM-120 or high school chemistry or equivalent

CHEM-109 provides a focused introduction to the chemistry of living things. Organic chemistry (the study of carbon compounds) is linked to biochemistry (the chemical basis of life) through the relationship of molecular structure and function. The CHEM-108 and 109 sequence is designed to meet the needs of programs such as dental hygiene and nursing. CSU, UC (credit limits may apply to UC - see counselor)

CHEM-120 General College Chemistry I
5 units LR
• 54 hours lecture/54 hours laboratory per term
• Prerequisite: CHEM-108 or score of 3, 4 or 5 on AP Chemistry Test or appropriate chemistry skill level demonstrated through Chemistry Diagnostic Test or equivalents; MATH-120 or 120SP or equivalent
• Recommended: Eligibility for ENGL-122 or equivalent

This course presents an introduction to the fundamentals of chemistry. Atomic theory, chemical reactions, bonding, structure, stoichiometry, gases, solutions, redox, thermodynamics, equilibrium, and acid-base chemistry will be covered. C-ID CHEM 110, CHEM-120+121=C-ID CHEM 120S, CSU, UC

CHEM-121 General College Chemistry II
5 units LR
• 54 hours lecture/108 hours laboratory per term
• Prerequisite: CHEM-120 or equivalent

This course is a continuation of CHEM-120. Buffers, titration curves, solubility products, thermodynamics, electrochemistry, kinetics, molecular orbital theory, coordination complexes, nuclear chemistry, organic chemistry, spectroscopy, quantitative experiments, and qualitative analysis will be addressed. CHEM-120+121=C-ID CHEM 120S, CSU, UC

CHEM-226 Organic Chemistry I
5 units LR
• 54 hours lecture/108 hours laboratory per term
• Prerequisite: CHEM-121 or equivalent

This course is the first term of a two term sequence (CHEM-226-227) that covers structure and bonding, stereochemistry, conformational analysis, reaction mechanisms, and the nomenclature, physical properties, and reactions of various classes of organic compounds (alkanes, alkenes, alkynes, aldehydes, ketones, carboxylic acids and their derivatives, and amines). The nature and reactions of multifunctional compounds, and the structure and reactions of biochemical molecules (carbohydrates, lipids, amino acids, proteins and nucleic acids) are also discussed. Laboratory work includes hands-on spectroscopic techniques (i.e. NMR, IR), qualitative organic analysis, more advanced projects involving synthesis, and a literature research project using university-level chemical literature resources. CHEM-226 + CHEM-227 = C-ID CHEM 160S, CSU, UC

CHEM-227 Organic Chemistry II
5 units LR
• 54 hours lecture/108 hours laboratory per term
• Prerequisite: CHEM-121 and CHEM-226 or equivalents

This course is the second term of a two term sequence (CHEM-226-227) that covers structure and bonding, stereochemistry, conformational analysis, reaction mechanisms, and the nomenclature, physical properties, and reactions of various classes of compounds (alkanes, alkenes, alkynes, aldehydes, ketones, carboxylic acids and their derivatives, and amines). The nature and reactions of multifunctional compounds, and the structure and reactions of biochemical molecules (carbohydrates, lipids, amino acids, proteins and nucleic acids) are also discussed. Laboratory work includes hands-on spectroscopic techniques (i.e. NMR, IR), qualitative organic analysis, more advanced projects involving synthesis, and a literature research project using university-level chemical literature resources. CHEM-226 + CHEM-227 = C-ID CHEM 160S, CSU, UC

CHEM-298 Independent Study
.5-3 units SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU
Chemical Engineering

CHEM-299  Student Instructional Assistant
.5-3 units  SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

Chinese – CHIN

Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

Possible career opportunities
The study of Chinese can open up opportunities in communications, foreign trade and banking, transportation, government, the Foreign Service, tourism, library services, teaching, professional translating, journalism, and all levels of education, including university teaching. Most foreign language careers require more than two years of study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Certificate of achievement

Mandarin Chinese

Students completing the program will be able to...
A. comprehend a spoken dialogue in the target language.
B. identify the present, past and future tenses in a written paragraph.
C. interpret cultural behavior.

This certificate of achievement was created to give students the opportunity to show potential employers in this country and in other countries that the student has completed a certain number of courses in Chinese and prepares students with an intermediate to advanced knowledge of Chinese and familiarizes them with the culture of China and other Chinese-speaking countries.

This certificate of achievement provides students, prospective employers and others with documented evidence of persistence and academic accomplishment in the language. The certificate requires completion of 15 to 20 units from the following list of courses. Students may not take a credit/no credit option for required courses and each course used to meet a certificate requirement must be completed with a “C” grade or higher.

complete at least 15 units from:

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<th>Requirement</th>
<th>Units</th>
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<tr>
<td>CHIN 120  First Term Mandarin Chinese</td>
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<td>CHIN 121  Second Term Mandarin Chinese</td>
<td>5</td>
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<tr>
<td>CHIN 220  Third Term Mandarin Chinese</td>
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<tr>
<td>CHIN 221  Fourth Term Mandarin Chinese</td>
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Certificate of achievement

Mandarin Chinese

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A. comprehend a spoken dialogue in the target language.
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CHIN-120  First Term Mandarin Chinese
5 units  SC
- 90 hours lecture per term
- Note: This course is equivalent to two years of high school study.

This beginning Chinese course emphasizes the development of language skills for listening, speaking, reading, and writing. Pronunciation drills, sentence pattern analysis, and character reading and writing will be introduced. Aspects of Chinese culture will be discussed. CSU, UC

CHIN-121  Second Term Mandarin Chinese
5 units  SC
- 90 hours lecture per term
- Prerequisite: CHIN-120 or two years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

A continuation of CHIN-120 for verbal and written purposes. Use of original Chinese characters is introduced at the sentence and the paragraph level. Students will be familiarized with both simplified and original writing systems. Cultural topics may include education, family, and daily life. Writing skills will be emphasized. The proficiency level should develop to a basic survival level. CSU, UC

CHIN-150  Topics in Chinese
.3-4 units  SC
- Variable hours

A supplemental course in Chinese to provide a study of current concepts and problems in Chinese and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

CHIN-220  Third Term Mandarin Chinese
5 units  SC
- 90 hours lecture per term
- Prerequisite: CHIN-120 or three years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

Students will learn to develop fluency in understanding, speaking, reading and writing Chinese. The uses of the six basic functional components of the Chinese sentence are expanded and new vocabulary and idiomatic expressions are introduced. Selected readings about Chinese culture and literature will be explored. This course is taught entirely in original Chinese characters, and students may use either of the Chinese written systems to develop their knowledge and ability. CSU, UC

CHIN-221  Fourth Term Mandarin Chinese
5 units  SC
- 90 hours lecture per term
- Prerequisite: CHIN-220 or four years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

Students will be able to develop fluency in all aspects of the Chinese language with particular attention to literary forms as reflected in the contemporary Chinese world. This course reviews grammar and develops reading and writing skills in Chinese. Passages from Chinese literature and readings about Chinese culture will be studied. Computer skills in Chinese will be introduced. CSU, UC

CHIN-298  Independent Study
.5-3 units  SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

CHIN-299  Student Instructional Assistant
.5-3 units  SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

COMMUNICATION STUDIES – COMM

Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language, Room 204

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.
In order to earn the degree, students must:

A. recognize the cultural, ethical, political, psychological and practical aspects of communication systems and models.
B. develop and present effective public presentations.
C. demonstrate an understanding of the role critical thinking plays in the effective analysis and development of messages.
D. demonstrate an understanding of interpersonal communication theory and practice the skills necessary for effective interpersonal interactions.
E. improve delivery skills when making public presentations.

The communication studies area views communicative behavior as central to human activity: to individual development, to interpersonal relationships, and to the functioning of political, economic, cultural, and social institutions. In addition, as effective verbal and nonverbal communication is a requirement for most jobs, the program prepares students for a wide variety of professions. Further, the program prepares students for careers in the fields of public relations, communication education, the performing arts, marketing, public relations, sales training and management. Additional careers in fields related to communication studies include salesperson, broadcaster, lawyer, tour guide, political campaign worker, teacher, customer service worker, public and international relations specialist, and negotiator/arbitrator.

The associate in arts in communication studies for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

- Complete 60 semester CSU transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

For the major:

- Earn a grade of “C” or higher in all courses required for the major.
- Obtain of a minimum grade point average (GPA) of 2.0.
- Complete a minimum of 18 semester units in the major.

For the certificate of achievement:

- Complete 60 semester CSU transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

Certificate of achievement

Communication studies

Students completing the program will be able to...

A. create and present a well structured persuasive presentation.
B. create and present a well structured informative presentation.
C. be aware of and able to apply interpersonal conflict resolution methods.

To earn a certificate of achievement in communication studies, students must complete three core courses supplemented by seven restricted electives from which students select a minimum of three units to meet their individual educational and career goals. The certificate program courses also meet some of the requirements of the major for the associate in arts degree in communication studies for transfer at Diablo Valley College.
Communication studies

plus at least 3 units from:
COMM-123 Argumentation and Debate..............................3
COMM-124 Voice and Diction........................................3
COMM-125 Intercultural Communication..........................3
COMM-130 Small Group Communication...........................3
COMM-148 Performance of Literature..............................3
COMM-155 Topics in Communication Studies......................0.3-4
COMM-163 Forensics - Speech and Debate.........................1.5-4
COMM-180 Introduction to Communication Theory...............3
COMM-298 Independent Study......................................0.5-3

total minimum required units 12

COMM-120 Public Speaking
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
In this course, students will prepare and present public speeches using the principles of effective communication. Emphasis is placed on speaking to inform, persuade, and special occasion speeches. Key principles covered include audience analysis, determining speech goals, organization, clarity, language, evidence, visual aids, and delivery. C-ID COMM 110, CSU, UC

COMM-121 Persuasion and Critical Thinking
3 units LR
• 54 hours lecture per term
• Prerequisite: ENGL-122 or equivalent
This course presents an introduction to the principles of reasoning and their application to the analysis and evaluation of political and marketplace communication. The integration of critical thinking principles with techniques of effective written and spoken argument will be emphasized. Topics will include the structure of argument, underlying assumptions, the quality of evidence used to support claims, the use of language, the discovery of formal and informational fallacies, and the effect of print and electronic media on argumentation. C-ID COMM 190, CSU, UC (credit limits may apply to UC - see counselor)

COMM-123 Argumentation and Debate
3 units LR
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents the application of the principles of argumentation theory, including the analysis of propositions, issues, evidence, and reasoning, and applying them through critical thinking skills in debate. Students will participate in graded debates in class. C-ID COMM 120, CSU, UC (credit limits may apply to UC - see counselor)

COMM-124 Voice and Diction
3 units SC
• 54 hours lecture per term
This course focuses on the improvement of the vocal instrument for the speaker. Drills and exercises will address vocal strength, resonance, inflection, articulation, and quality. This course is intended for the general student, as well as communication, speech and drama majors. CSU, UC

COMM-125 Intercultural Communication
3 units SC
• 54 hours lecture per term
This course is an introduction to intercultural communication in domestic and/or global contexts. The course studies the influence of cultures, languages, and social patterns on how members of groups relate among themselves and with members of different ethnic and cultural groups. It teaches theory and knowledge of effective communication within and between cultures. Appreciation and comparison of communication of diverse groups within the larger context of culture in the United States is an important part of the course. C-ID COMM 150, CSU, UC

COMM-128 Interpersonal Communication
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course provides an introduction to the theory, basic principles, and methods of oral communication, with emphasis on improving speaking and listening skills within the context of interpersonal communication. Psychological, social, cultural, and linguistic factors which affect human interaction are emphasized. Attention will also be given to perception, listening, conflict resolution, relationship development and stages, and verbal and nonverbal communication. C-ID COMM 130, CSU, UC

COMM-130 Small Group Communication
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course is a study of communication theory and research applied to working in small groups. Emphasis will be on individual communication behaviors and group practices that create successful group work. Skill development includes leadership, oral communication and team work. C-ID COMM 140, CSU, UC

COMM-148 Performance of Literature
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
Introduction to performance studies; analysis, appreciation, and application of theories of interpretive performance of various forms of literature including poetry, prose, and drama (plays, scripts and screenplays). C-ID COMM 170, CSU, UC
COMM-155  Topics in Communication Studies
.3-4 units  SC
- Variable hours
- Recommended: Eligibility for ENGL-122 or equivalent
In this class, students will learn current concepts and problems related to the area of communication studies being focused on. Specific topics will be announced in the schedule of classes. CSU

COMM-163  Forensics - Speech and Debate
1.5-4 units  SC
- May be repeated three times
- Variable hours
- Recommended: Eligibility for ENGL-122 or equivalent
This course prepares students to participate in intercollegiate speech and debate tournaments and/or community events. Students will research, write, and practice speeches. Students will perform speeches at competitive/community events. C-ID COMM 160B, CSU, UC

COMM-180  Introduction to Communication Theory
3 units  SC
- 54 hours lecture per term
This course is a survey of the discipline of communication studies with emphasis on multiple epistemological, theoretical, and methodological issues relevant to the systematic inquiry and pursuit of knowledge about human communication. Students will explore the basic history, assumptions, principles, processes, variables, methods, and specializations of human communication as an academic field of study. C-ID COMM 180, CSU, UC

COMM-298  Independent Study
.5-3 units  SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.
Students will conduct additional research, a special project, or learning activities in a specific discipline/subject area. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. (This course is not intended to replace an existing course.) CSU

COMM-299  Student Instructional Assistant
.5-3 units  SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

COMPUTER INFORMATION SYSTEMS – CIS
Mike Holtzclaw, Senior Dean
San Ramon Campus Division
San Ramon Campus

Possible career opportunities
Training in computer information systems prepares students for a broad range of roles. Some possible career options include webmaster, web developer, web designer, executive assistant, office manager, office assistant, entrepreneur, database analyst, database designer, computer trainer, project manager, and team member in a startup.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Computer information systems
Students completing the program will be able to...
A. perform the duties of Information Technologies and Management workers as identified by the Bureau of Labor Statistics
B. provide technical assistance and training to computer system users.
C. investigate and resolve computer software and hardware problems of users.
D. perform the professional duties demanded in any modern office environment.
E. design and maintain static and dynamic web sites.
F. integrate elements such as graphics, animation and streaming media on web sites.
G. develop and implement database systems for stand alone or internet based deployment.
H. use technology to manage multi-faceted projects.
I. demonstrate basic graphical user interface operations in a computer environment.
J. produce spreadsheets, documents and presentations by using basic to advanced software operations.

The computer information systems associate in science program prepares the student for jobs in business and government as information technologies and management workers. Principal areas of study are computer software applications, internet technologies, database systems, project management systems and basic network principles. These CIS courses prepare students for a career path in computer information systems and technologies. These courses teach terminology and provide hands-on laboratory experience with operating and network systems and stand alone and internet based applications.
Computer information systems

In order to obtain an associate in science degree, students must complete the courses required for the core certificate of achievement and a minimum of one area of technical specialization, and complete all general education requirements as listed in the Diablo Valley College catalog. To earn a degree, students must complete each course used to meet a major requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the major. Other electives and course substitutions not listed below are possible with department chairperson approval.

Students are limited to one associate in science degree regardless of the number of specializations completed. Multiple certificates may be awarded.

**major requirements:**

<table>
<thead>
<tr>
<th>Core courses:</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-115  Microsoft Word - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-116  Microsoft Excel - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-118  Microsoft PowerPoint - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-100  Microsoft Windows - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-101  Apple Mac Operating System</td>
<td>2</td>
</tr>
<tr>
<td>CIS-117  Microsoft Access - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-119  Microsoft Outlook - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>COMSC-138  Advanced Microsoft Office Using Visual Basic for Applications (VBA)</td>
<td>2</td>
</tr>
</tbody>
</table>

**Core courses units subtotal: 12**

Choose one of the following four technical specialization areas:

**Database management - required courses:**

| CIS-107  Introduction to Web Databases | 2 |
| CIS-117  Microsoft Access - Comprehensive | 2 |
| CIS-160  Introduction to MySQL | 2 |

**Project management - required courses:**

| CIS-180  Introduction to Project Management | 3 |
| CIS-181  Project Management Fundamentals/PMI PMP Preparation | 3 |

**Project management - recommended electives:**

| CIS-182  Project Risk Management | 3 |
| CIS-185  Project Management Tools | 2 |

**Web graphics - required courses:**

| CIS-130  Adobe Photoshop Elements | 2 |
| CIS-132  Adobe Premiere Elements - Comprehensive | 2 |
| CIS-133  Developing Video Content for the Web | 2 |

**Web technology - required courses:**

| CIS-105  Introduction to Web Design | 2 |
| CIS-106  Adobe Dreamweaver - Comprehensive | 2 |
| CIS-107  Introduction to Web Databases | 2 |

**Web technology - recommended electives:**

| CIS-108  Introduction to WordPress | 2 |
| CIS-117  Microsoft Access - Comprehensive | 2 |
| CIS-120  iPhone and iPad App Development for Beginners | 2 |
| CIS-160  Introduction to MySQL | 2 |

**Total minimum required units: 18**

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**Certificate of achievement**

**Computer information systems - core**

**Students completing the program will be able to:**

A. demonstrate basic graphical user interface operations in a computer environment.

B. produce spreadsheets, documents, and presentations by using basic to advanced software operations.

**Required courses:**

| CIS-115  Microsoft Word - Comprehensive | 2 |
| CIS-116  Microsoft Excel - Comprehensive | 2 |
| CIS-118  Microsoft PowerPoint - Comprehensive | 2 |
| CIS-100  Microsoft Windows - Comprehensive | 2 |
| CIS-101  Apple Mac Operating System | 2 |

**plus at least 4 units from:**

| CIS-117  Microsoft Access - Comprehensive | 2 |
| CIS-119  Microsoft Outlook - Comprehensive | 2 |
| COMSC-138  Advanced Microsoft Office Using Visual Basic for Applications (VBA) | 2 |

**Total minimum required units: 12**

**Certificate of achievement**

**Computer information systems - database management**

**Students completing the program will be able to:**

A. demonstrate basic graphical user interface operations in a computer environment.

B. produce spreadsheets, documents, and presentations by using basic to advanced software operations.

C. apply database syntax, properties, operators, and functions.

**Required courses:**

| CIS-107  Introduction to Web Databases | 2 |
| CIS-115  Microsoft Word - Comprehensive | 2 |
| CIS-116  Microsoft Excel - Comprehensive | 2 |
| CIS-117  Microsoft Access - Comprehensive | 2 |
| CIS-119  Microsoft PowerPoint - Comprehensive | 2 |
| CIS-160  Introduction to MySQL | 2 |
| COMSC-138  Advanced Microsoft Office Using Visual Basic for Applications (VBA) | 2 |

**plus at least 2 units from:**

| CIS-100  Microsoft Windows - Comprehensive | 2 |
| CIS-101  Apple Mac Operating System | 2 |

**Total minimum required units: 18**
Certificate of achievement  
Computer information systems - project management  
Students completing the program will be able to...  
A. demonstrate basic graphical user interface operations in a computer environment.  
B. produce spreadsheets, documents and presentations by using basic to advanced software operations.  
C. apply the principles of the Project Management Institute (PMI) processes of project management.  

required courses:  
CIS-115 Microsoft Word - Comprehensive .................. 2  
CIS-116 Microsoft Excel - Comprehensive .................. 2  
CIS-118 Microsoft PowerPoint - Comprehensive .... 2  
CIS-180 Introduction to Project Management ............. 3  
CIS-181 Project Management Fundamentals/PMI PMP Preparation .................. 3  

plus at least 2 units from:  
CIS-100 Microsoft Windows - Comprehensive ........ 2  
CIS-101 Apple Mac Operating System ...................... 2  

plus at least 4 units from:  
CIS-117 Microsoft Access - Comprehensive ............ 2  
CIS-119 Microsoft Outlook - Comprehensive ............. 2  
COMSC-138 Advanced Microsoft Office Using Visual Basic for Applications (VBA) .................. 2  

project management - recommended electives:  
CIS-182 Project Risk Management ......................... 3  
CIS-185 Project Management Tools ......................... 2  

total minimum required units 18

Certificate of achievement  
Computer information systems - web graphics  
Students completing the program will be able to...  
A. demonstrate basic graphical user interface operations in a computer environment.  
B. produce spreadsheets, documents and presentations by using basic to advanced software operations.  
C. perform the duties demanded in any modern office environment.  
D. able to prepare images for sharing and distribution.  

required courses:  
CIS-115 Microsoft Word - Comprehensive .................. 2  
CIS-116 Microsoft Excel - Comprehensive .................. 2  
CIS-118 Microsoft PowerPoint - Comprehensive .... 2  
CIS-130 Adobe Photoshop Elements ....................... 2  
CIS-132 Adobe Premiere Elements - Comprehensive ................. 2  
CIS-133 Developing Video Content for the Web ............ 2  

plus at least 2 units from:  
CIS-100 Microsoft Windows - Comprehensive ........ 2  
CIS-101 Apple Mac Operating System ...................... 2  

plus at least 4 units from:  
CIS-117 Microsoft Access - Comprehensive ............ 2  
CIS-119 Microsoft Outlook - Comprehensive ............. 2  
COMSC-138 Advanced Microsoft Office Using Visual Basic for Applications (VBA) .................. 2  

web technology - recommended electives:  
CIS-108 Introduction to WordPress ......................... 2  
CIS-117 Microsoft Access - Comprehensive ............ 2  
CIS-120 iPhone and iPad App Development for Beginners .................. 2  
CIS-160 Introduction to MySQL .................. 2  

Certificate of accomplishment  
Computer information systems - database management  
Students completing the program will be able to...  
A. demonstrate basic graphical user interface operations in a computer environment.  
B. apply database syntax, properties, operators, and functions.  

required courses:  
CIS-107 Introduction to Web Databases .................. 2  
CIS-117 Microsoft Access - Comprehensive ............ 2  
CIS-160 Introduction to MySQL .................. 2  

total minimum required units 6
Certificate of accomplishment
Computer information systems - project management
Students completing the program will be able to...
A. demonstrate basic graphical user interface operations in a computer environment.
B. apply the principles of the Project Management Institute’s (PMI) processes of project management.

required courses:  units
CIS-180  Introduction to Project Management...............  3
CIS-181  Project Management Fundamentals/PMI PMP Preparation.............  3

total minimum required units  6

project management - recommended electives:
CIS-182  Project Risk Management..........................  3
CIS-185  Project Management Tools..........................  2

Certificate of accomplishment
Computer information systems - web graphics
Students completing the program will be able to...
A. demonstrate basic graphical user interface operations in a computer environment.
B. able to prepare images for sharing and distribution.

required courses:  units
CIS-130  Adobe Photoshop Elements......................  2
CIS-132  Adobe Premiere Elements - Comprehensive..........................  2
CIS-133  Developing Video Content for the Web...........  2

total minimum required units  6

Certificate of accomplishment
Computer information systems - web technology
Students completing the program will be able to...
A. demonstrate basic graphical user interface operations in a computer environment.
B. plan and design web pages.

required courses:  units
CIS-105  Introduction to Web Design.......................  2
CIS-106  Adobe Dreamweaver - Comprehensive...............  2
CIS-107  Introduction to Web Databases....................  2

web technology - recommended electives:
CIS-108  Introduction to WordPress......................  2
CIS-117  Microsoft Access - Comprehensive...............  2
CIS-120  iPhone and iPad App Development for Beginners..........................  2
CIS-160  Introduction to MySQL............................  2

total minimum required units  6

CIS-100  Microsoft Windows - Comprehensive
2 units  SC
• 36 hours lecture/18 hours laboratory per term
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
This course teaches the functions of Microsoft Windows Operating System (OS). It prepares students to use the various local and network functions of the current Windows OS. No previous computer experience is required. CSU

CIS-101  Apple Mac Operating System
2 units  SC
• 36 hours lecture/18 hours laboratory per term
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
This course teaches the functions of the Apple Mac Operating System, including the graphical user interface, file and folder management, system preferences, and networking. No previous computer experience is required. CSU

CIS-105  Introduction to Web Design
2 units  SC
• 36 hours lecture/18 hours laboratory per term
• Recommended: CIS-100 or CIS-101 or equivalent
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
This course introduces students to the web development cycle. This process is used to create, organize, and maintain web sites that are easy to use and understand. Emphasis is placed on navigation, organization, presentation, and maintenance of websites. No previous web design experience is required. CSU

CIS-106  Adobe Dreamweaver - Comprehensive
2 units  SC
• 36 hours lecture/18 hours laboratory per term
• Recommended: CIS-100 or CIS-101 or equivalent
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
This course is for students who want to learn the comprehensive functions of Adobe Dreamweaver. This program, which is part of the Adobe Creative Suite, is a web authoring and web animation software that is used industry wide. This course is for students who want a deeper understanding of the program. No previous experience with this software is required. CSU
CIS-107  Introduction to Web Databases  
2 units  SC  
- 36 hours lecture/18 hours laboratory per term  
- Recommended: CIS-100 or CIS-101 or equivalent  
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course presents the fundamentals of database-driven web page development. Topics will include basic database configuration, the use of server-side tools to connect to a database, and the display and manipulation of database content over the web. CSU

CIS-108  Introduction to WordPress  
2 units  SC  
- 36 hours lecture/18 hours laboratory per term  
- Recommended: CIS-100 or CIS-101 or equivalent  
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces students to WordPress. This easy-to-use software is used to create, organize, and maintain web sites. Emphasis is placed on installation, configuration, navigation, organization, presentation, and maintenance of web sites. No previous web design experience is required. CSU

CIS-115  Microsoft Word - Comprehensive  
2 units  SC  
- 36 hours lecture/18 hours laboratory per term  
- Recommended: CIS-100 or CIS-101 or equivalent  
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course is for students who want to learn the comprehensive functions of Microsoft Word, a powerful word processing program which is part of the Microsoft Office Suite. This course prepares students for Microsoft certification testing but is also useful for students who want a deeper understanding of the program. No previous experience with this software is required. CSU

CIS-116  Microsoft Excel - Comprehensive  
2 units  SC  
- 36 hours lecture/18 hours laboratory per term  
- Recommended: CIS-100 or CIS-101 or equivalent  
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course is for students who want to learn the comprehensive functions of Microsoft Excel, a powerful spreadsheet program which is part of the Microsoft Office Suite. This course prepares students for Microsoft certification testing but is also useful for students who want a deeper understanding of the program. No previous experience with this software is required. CSU

CIS-117  Microsoft Access - Comprehensive  
2 units  SC  
- 36 hours lecture/18 hours laboratory per term  
- Recommended: CIS-100 or CIS-101 or equivalent  
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course is for students who want to learn the comprehensive functions of Microsoft Access, a powerful database program which is part of the Microsoft Office Suite. This course prepares students for Microsoft certification testing but is also useful for students who want a deeper understanding of the program. No previous experience with this software is required. CSU

CIS-118  Microsoft PowerPoint - Comprehensive  
2 units  SC  
- 36 hours lecture/18 hours laboratory per term  
- Recommended: CIS-100 or CIS-101 or equivalent.  
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course is for students who want to learn the comprehensive functions of Microsoft PowerPoint, a powerful presentation program which is part of the Microsoft Office Suite. This course prepares students for Microsoft certification testing but is also useful for students who want a deeper understanding of the program. No previous experience with this software is required. CSU
**Computer Information Systems**

**CIS-119 Microsoft Outlook - Comprehensive**
2 units  SC
- 36 hours lecture/18 hours laboratory per term
- Recommended: CIS-100 or CIS-101 or equivalent
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course is for students who want to learn the comprehensive functions of Microsoft Outlook, a powerful email and personal information manager program which is part of the Microsoft Office Suite. This course prepares students for Microsoft certification testing but is also useful for students who want a deeper understanding of the program. No previous experience with this software is required. CSU

**CIS-120 iPhone and iPad App Development for Beginners**
2 units  SC
- 36 hours lecture/18 hours laboratory per term
- Recommended: CIS-100 or CIS-101 or equivalent
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces students to application (app) development for iPhone and iPad devices. Essentials of iPhone and iPad app development including tools, frameworks, and concepts are covered. Hands-on exercises will be used to reinforce theory. No previous app development experience is required. Students will learn the essentials of iPhone and iPad app development: the tools, frameworks, and concepts. Hands-on exercises will be part of this course. CSU

**CIS-130 Adobe Photoshop Elements**
2 units  SC
- 36 hours lecture/18 hours laboratory per term
- Recommended: CIS-100 or CIS-101 or equivalent
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course helps students to develop proficiency in Adobe Photoshop Elements; it covers acquiring, organizing, fixing, enhancing and sharing images. CSU

**CIS-132 Adobe Premiere Elements - Comprehensive**
2 units  SC
- 36 hours lecture/18 hours laboratory per term
- Recommended: CIS-100 or CIS-101 or equivalent
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course will allow students to gain proficiency in Adobe Premiere Elements, covering video acquisition, editing, titling, web and DVD authoring. CSU

**CIS-133 Developing Video Content for the Web**
2 units  SC
- 36 hours lecture/18 hours laboratory per term
- Recommended: CIS-100 or CIS-101 or equivalent
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course prepares students to take digitally formatted video and prepare it for use on the Internet. Students will learn how to import digital video, create screen captures, edit, and produce video for distribution via online and other digital media. CSU

**CIS-150 Topics in Computer Information Systems**
.3-4 units  SC
- Variable hours

A supplemental course in computer information systems to provide a study of current concepts and problems. Specific topics will be announced in the schedule of classes. CSU

**CIS-160 Introduction to MySQL**
2 units  SC
- 36 hours lecture/18 hours laboratory per term
- Recommended: CIS-100 or CIS-101 or equivalent
- Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces students to the MySQL database program, which is used to create, organize, and maintain dynamic web sites. Emphasis is placed on table creation, queries, and database management. CSU
CIS-170 Networking for Non-IT Professionals
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Note: Credit by examination option available. No previous networking experience is required. Students interested in professional training in computer networking should see the Computer Network Technology (CNT) programs in this catalog.

This course presents the basics of networking and introduces the core networking topologies, implementation options and commonly used network devices, such as Network Interface Cards (NICs), hubs, switches, and routers. Emphasis is placed on networking theory and implementation specifically designed for small office and home networking environments. CSU

CIS-180 Introduction to Project Management
3 units SC
• 54 hours lecture per term
• Note: Credit by examination option available

This is an introductory course in professional project management. This course prepares students to become project management professionals by defining its origins and introducing key base concepts, terminology, and processes. The foundation work developed here will prepare students to continue in the project management course of study. This course requires no previous experience with project management. CSU

CIS-181 Project Management/PMI PMP Preparation
3 units SC
• 54 hours lecture per term
• Recommended: CIS-180 or equivalent
• Note: Credit by examination option available

This course is an intermediate course on formal professional project management. This course prepares the student to take the internationally recognized Project Management Institute (PMI) Project Management Professional (PMP) certification exam. Earning a PMP certification demonstrates that the student has acquired the skills to manage projects, deliver products and has a solid knowledge of PMP fundamentals. CSU

CIS-182 Project Risk Management
3 units SC
• 54 hours lecture per term
• Recommended: CIS-180 or equivalent

This course presents an introduction to the risks associated with the management of projects. The skills needed to manage risks associated with projects, deliver projects based on a solid plan and mitigate any risk factors to those projects, will be examined. CSU

CIS-185 Project Management Tools
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Recommended: CIS-100 or CIS-101 or equivalent
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces students to software tools used in project management such as, MS Visio and MS Project. Students will create, save and publish, flow charts, diagrams and task lists. In addition, students will set up and assign project resources, track progress on tasks, organize and format project details, and publish project information. CSU

Possible career opportunities
These CNT-courses prepare students for a career path in computer network technologies. These courses teach terminology and provide hands-on laboratory experience with operating systems and network devices. These courses begin to prepare the student for popular vendor certifications such as MCSE, MCSA, MSDBA, CCNA, CCNP, CCDA, CCDP, and copper/fiber cabling to name a few.

The job titles of people employed in computer networking include: systems administrator, network administrator, network engineer, database administrator, LAN specialist and network designer.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Information and communication technology

Students completing the program will be able to...

A. list, describe, and configure TCP/IP protocols and ports.
B. apply and configure appropriate security measures.
C. maintain and upgrade computer systems.
D. install and configure Microsoft Windows operating systems and applications.
E. document and communicate system design and architecture.
F. demonstrate basic computer and networking literacy.
G. demonstrate a basic understanding of physical science.
This two-year associate in science degree program is intended to prepare the student for jobs in business and government as introductory positions such as network control specialist, computer system specialists, or specialist network control, entry-level help desk analyst, computer technician, to name a few. A graduate of this program will be able to sit for the Cisco Certified Network Associate (CCNA) exam, the CompTia A+ exam, the CompTia Net+ exam and other industry recognized exams depending on course selection. A graduate will have the required skills to install and configure local area networks that carry data, voice, and video communications, install, operate and maintain network servers, routers, switches, and other network devices, resolve network communication problems, support and troubleshoot Personal Computers (PCs), work with a team and demonstrate desirable customer service and communication skills.

NOTE: exact skills will depend on course selection.

DVC information and communication technology students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.

To earn an associate in science degree with a major in information and communication technology, students must complete each course used to meet a major requirement with a "C" grade or higher and complete general education requirements as listed in the catalog. Degree requirements can be completed by attending classes in the day, the evening, or both. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

major requirements:
- CNT-103 Voice, Video and Network Cabling .......................2
- CNT-104 IT Essentials (A+) ........................................4
- CNT-106 Introduction to Networks ..................................3
- COMSC-101 Computer Literacy ......................................4
- COMSC-110 Introduction to Programming ..........................4

plus at least 6 units from:
- BUS-250 Business Communications I .............................3
- CNT-114 Microsoft Windows Operating System Essentials/Administration .......................3
- CNT-120 Routing and Switching Essentials .....................3
- CNT-140 Introduction to Information Systems Security ........3
- CNT-148 Introduction to Cybersecurity: Ethical Hacking ....3
- CNT-149 Digital Forensics Fundamentals .........................3
- COMSC-121 Database Administration ............................4

plus at least 3 units from:
- BUS-240 Business Statistics .........................................3
- MATH-142 Elementary Statistics with Probability ...........4
- MATH-181 Finite Mathematics .......................................3
- MATH-182 Calculus for Management, Life Science and Social Science I .....................................4
- MATH-192 Analytic Geometry and Calculus I .................5

**total minimum required units** 26

Associate in science degree
Server and system administration

Students completing the program will be able to...

A. list, describe, and configure TCP/IP protocols and ports.
B. apply and configure appropriate security measures.
C. maintain and upgrade computer systems.
D. install and configure Microsoft Windows operating systems and applications.
E. document and communicate system design and architecture.
F. demonstrate basic computer and networking literacy.
G. demonstrate a basic understanding of physical science.

The associate in science degree in server and system administration prepares students to enter the workforce as a server and/or system administrator.

Server and system administrators are responsible to manage an organizations servers and desktop and mobile equipment. They ensure that email and data storage networks work properly. They also make sure that employees’ workstations are working efficiently and stay connected to the central computer network. Some administrators manage telecommunications networks.

In some cases, administrators help network architects design and analyze network models. They also participate in decisions about buying future hardware or software to upgrade their organization’s network. Some administrators provide technical support to computer users, and they also may supervise computer support technicians who help solve users’ problems.

Graduates are prepared and eligible to sit for various industry certification exams.

DVC server and system administration students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.

To earn an associate in science degree with a major in server and system administration, students must complete each course used to meet a major requirement with a “C” grade or higher and complete all general education requirements listed in the catalog. Degree requirements can be completed by attending classes in the day, the evening, or both. Certain courses may satisfy both a major and a graduation requirement; however the units are only counted once.

major requirements:
- BUS-250 Business Communications I .............................3
- CNT-104 IT Essentials (A+) ........................................4
- CNT-106 Introduction to Networks ..................................3
- CNT-114 Microsoft Windows Operating System Essentials/Administration .......................3
- CNT-117 Implementing Microsoft Windows Directory Services .........................................3
- COMSC-101 Computer Literacy ......................................4
Certificate of achievement
Information and communication technology

Students completing the program will be able to...

A. list, describe, and configure TCP/IP protocols and ports.
B. apply and configure appropriate security measures.
C. maintain and upgrade computer systems.
D. install and configure Microsoft Windows operating systems and applications.
E. document and communicate system design and architecture.
F. demonstrate basic computer and networking literacy.
G. demonstrate a basic understanding of physical science.

This certificate of achievement program is intended to prepare the student for jobs in business and government as introductory positions such as network control specialist, computer system specialists, or specialist network control, entry-level help desk Analyst, computer technician, to name a few. A graduate of this program will be able to sit for the Cisco Certified Network Associate (CCNA) exam, the CompTia A+ exam, the CompTia Net+ exam and other industry recognized exams depending on course selection. A graduate will have the required skills to install and configure local area networks that carry data, voice, and video communications, install, operate and maintain network services, routers, switches, and other network devices, resolve network communication problems, support and troubleshoot Personal Computers (PCs), work with a team and demonstrate desirable customer service and communication skills. NOTE: exact skills will depend on course selection.

To earn a certificate of achievement in information and communication technology, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Certificate requirements can be completed by attending classes in the day, evening, online, or a combination of those.

major requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNT-103</td>
<td>Voice, Video and Network Cabling</td>
</tr>
<tr>
<td>CNT-104</td>
<td>IT Essentials (A+)</td>
</tr>
<tr>
<td>CNT-106</td>
<td>Introduction to Networks</td>
</tr>
<tr>
<td>COMSC-101</td>
<td>Computer Literacy</td>
</tr>
<tr>
<td>COMSC-110</td>
<td>Introduction to Programming</td>
</tr>
</tbody>
</table>

Certificate of achievement
Network cybersecurity

Students completing the program will be able to...

A. list, describe, and configure TCP/IP protocols and ports.
B. apply and configure appropriate security measures.
C. maintain and upgrade computer systems.
D. install and configure Microsoft Windows operating systems and applications.
E. document and communicate system design and architecture.
F. demonstrate basic computer and networking literacy.
G. demonstrate a basic understanding of physical science.

This program prepares students for a variety of entry-level positions in IT network security and cybersecurity. This program builds on the foundation obtained after completing the Network technology fundamentals certificate of achievement. A student completing this program can apply for jobs such as Computer Network Support Specialist, Computer Network Defense Analyst, Computer Network Defense Infrastructure Support, network Services, Penetration Tester, Systems Security Analyst; to name a few. To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher.

required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNT-106</td>
<td>Introduction to Networks</td>
</tr>
<tr>
<td>CNT-120</td>
<td>Routing and Switching Essentials</td>
</tr>
<tr>
<td>CNT-140</td>
<td>Introduction to Information Systems Security</td>
</tr>
<tr>
<td>CNT-146</td>
<td>Cisco Certified Network Associate (CCNA) Security</td>
</tr>
<tr>
<td>CNT-148</td>
<td>Introduction to Cybersecurity: E Ethical Hacking</td>
</tr>
<tr>
<td>CNT-149</td>
<td>Digital Forensics Fundamentals</td>
</tr>
</tbody>
</table>

plus at least 6 units from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNT-116</td>
<td>Implementing Windows Server Enterprise</td>
</tr>
<tr>
<td>CNT-118</td>
<td>Implementing a Microsoft Windows Network Infrastructure</td>
</tr>
<tr>
<td>CNT-125</td>
<td>Introduction to Virtualization Technology</td>
</tr>
<tr>
<td>CNT-138</td>
<td>Implementing and Managing Microsoft Exchange Server</td>
</tr>
<tr>
<td>CNT-148</td>
<td>Introduction to Cybersecurity: Ethical Hacking</td>
</tr>
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<td>CNT-149</td>
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</tr>
</tbody>
</table>

plus at least 3 units from:

<table>
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<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>BUS-240</td>
<td>Business Statistics</td>
</tr>
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<td>Elementary Statistics with Probability</td>
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<td>Finite Mathematics</td>
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<tr>
<td>MATH-182</td>
<td>Calculus for Management, Life Science and Social Science</td>
</tr>
<tr>
<td>MAT1-192</td>
<td>Analytic Geometry and Calculus</td>
</tr>
</tbody>
</table>

total minimum required units: 26

plus at least 6 units from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNT-114</td>
<td>Microsoft Windows Operating System Essentials/Administration</td>
</tr>
<tr>
<td>CNT-120</td>
<td>Routing and Switching Essentials</td>
</tr>
<tr>
<td>CNT-140</td>
<td>Introduction to Information Systems Security</td>
</tr>
<tr>
<td>CNT-148</td>
<td>Introduction to Cybersecurity</td>
</tr>
<tr>
<td>CNT-149</td>
<td>Digital Forensics Fundamentals</td>
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<tr>
<td>COMSC-121</td>
<td>Database Administration</td>
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</table>

plus at least 3 units from:

<table>
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<td>Calculus for Management, Life Science and Social Science</td>
</tr>
<tr>
<td>MAT1-192</td>
<td>Analytic Geometry and Calculus</td>
</tr>
</tbody>
</table>

total minimum required units: 26
Certificate of achievement
Network technology fundamentals
Students completing the program will be able to...
A. list, describe, and configure TCP/IP protocols and ports.
B. apply and configure appropriate security measures.
C. maintain and upgrade computer systems.
D. install and configure Microsoft Windows operating systems and applications.
E. document and communicate system design and architecture.
F. demonstrate basic computer and networking literacy.
G. demonstrate a basic understanding of physical science.

This program prepares students for a variety of entry level positions in IT networking and the beginning foundation for a student wanting to pursue a career in cyber defense, network forensics, network security and eventually cyber security. To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher.

required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Required Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNT-103</td>
<td>Voice, Video and Network Cabling</td>
<td>2</td>
</tr>
<tr>
<td>CNT-104</td>
<td>IT Essentials (A+)</td>
<td>3</td>
</tr>
<tr>
<td>CNT-106</td>
<td>Introduction to Networks</td>
<td>3</td>
</tr>
<tr>
<td>CNT-114</td>
<td>Microsoft Windows Operating System Essentials/Administration</td>
<td>3</td>
</tr>
<tr>
<td>CNT-120</td>
<td>Routing and Switching Essentials</td>
<td>3</td>
</tr>
<tr>
<td>COMSC-101</td>
<td>Computer Literacy</td>
<td>4</td>
</tr>
</tbody>
</table>

**total minimum required units** 19

Certificate of achievement
Server and system administration
Students completing the program will be able to...
A. list, describe, and configure TCP/IP protocols and ports.
B. apply and configure appropriate security measures.
C. maintain and upgrade computer systems.
D. install and configure Microsoft Windows operating systems and applications.
E. document and communicate system design and architecture.
F. demonstrate basic computer and networking literacy.
G. demonstrate a basic understanding of physical science.

The certificate of achievement in server and system administration prepares students to enter the workforce as a server and/or system administrator.

Server and system administrators are responsible to manage an organization’s servers and desktop and mobile equipment. They ensure that email and data storage networks work properly. They also make sure that employees’ workstations are working efficiently and stay connected to the central computer network. Some administrators manage telecommunications networks.

Certificate of accomplishment
Microsoft Windows systems administration
Students completing the program will be able to...
A. list, describe, and configure TCP/IP protocols and ports.
B. apply and configure appropriate security measures.
C. maintain and upgrade computer systems.
D. install and configure Microsoft Windows operating systems and applications.
E. document and communicate system design and architecture.
F. demonstrate basic computer and networking literacy.
G. demonstrate a basic understanding of physical science.

The certificate of accomplishment in Microsoft Windows systems administration prepares students for a career in information technology through an in-depth study of networking with Microsoft products.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher.
required courses:

- CNT-114 Microsoft Windows Operating System Essentials/Administration .......................... 3
- CNT-116 Implementing Windows Server Enterprise .............................................. 3
- CNT-117 Implementing Microsoft Windows Directory Services ........................................ 3
- CNT-118 Implementing a Microsoft Windows Network Infrastructure ........................................ 3

plus at least 3 units from:

- CNT-138 Implementing and Managing Microsoft Exchange Server .............................................. 3
- CNT-148 Introduction to Cybersecurity: Ethical Hacking ................................................ 3

Total minimum required units 15

CNT-103 Voice, Video and Network Cabling

2 units LR
- 27 hours lecture/27 hours laboratory per term

This course presents the practical aspects of design, installation, testing, and troubleshooting cable carrying voice, data, video, and wireless signals. Successful completion of this course makes a student eligible to sit for the Fiber Optics Association (FOA) certification examination. CSU

CNT-104 IT Essentials (A+)

4 units SC
- 54 hours lecture/54 hours laboratory per term
- Recommended: COMSC-101 or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course provides an introduction to the computer hardware and software skills needed to help meet the growing demand for entry-level IT professionals. The fundamentals of computer hardware and software as well as advanced concepts such as security, networking, and the responsibilities of an IT professional will be introduced. Preparation for CompTIA’s A+ certification exam is provided. CSU

CNT-106 Introduction to Networks

3 units SC
- 36 hours lecture/54 hours laboratory per term
- Recommended: COMSC-101 or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
- Formerly CNT-105

This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The course uses the OSI and TCP layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. Students build simple LAN topologies by applying basic principles of cabling; performing basic configurations of network devices, including routers and switches; and implementing IP addressing schemes. This course is preparation for the CompTIA Network+, Cisco Certified Entry-Level Network Technician (CCENT) and Cisco Certified Network Associate (CCNA) certification exams. CSU

CNT-114 Microsoft Windows Operating System Essentials/Administration

3 units SC
- 36 hours lecture/54 hours laboratory per term
- Recommended: CNT-106 or equivalent; COMSC-101 or equivalent

This course is an introduction to Microsoft Windows server operating system and network support. Topics include user accounts, groups and group scopes, permissions, security, Active Directory terminology, optimizing Internet Protocol (IP) address allocation, utilities, and Web Services. CSU

CNT-116 Implementing Windows Server Enterprise

3 units LR
- 45 hours lecture/27 hours laboratory per term
- Recommended: CNT-114 or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces students to the installation and configuration of Microsoft Windows Professional on stand-alone computers and on client computers connected to a workgroup or domain. The skills and knowledge necessary to install and configure Windows Server, to create files, print, and Terminal Servers will be covered. Students will also administer an organizational unit within a single domain structure. CSU
Computer network technology

**CNT-117 Implementing Microsoft Windows Directory Services**
3 units LR
- 45 hours lecture/27 hours laboratory per term
- Recommended: CNT-116 or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

Students will learn to install, configure, and administer Microsoft Windows Active Directory directory services. The course also focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers. Students will use Group Policies to configure and manage the user desktop environment, to configure and manage software, and implement and manage security settings. Students will install and manage Windows Domains and Domain Controllers through Active Directory. CSU

**CNT-118 Implementing a Microsoft Windows Network Infrastructure**
3 units LR
- 45 hours lecture/27 hours laboratory per term
- Recommended: CNT-116 or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course will enable students to install, configure, manage and support a network infrastructure that uses the Microsoft Windows Server products. The course focuses heavily on TCP/IP and related services including DHCP Server service, DNS Server service, WINS, network security protocols, Public Key Infrastructure (PKI), Internet Protocol Security (IPSec), and remote access. The course also enables the student to configure Windows as a network router, configure Internet access for a network, configure a Web server, and manage a Windows deployment using Remote Installation Services (RIS). CSU

**CNT-120 Routing and Switching Essentials**
3 units LR
- 36 hours lecture/54 hours laboratory per term
- Prerequisite: CNT-106 or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
- Formerly CNT-161

This course presents the architecture, components, and operations of routers and switches in a small network. Students will configure routers and switches for basic functionality. Students will configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. This course is preparation for the Cisco Certified Entry-Level Network Technician (CCENT) and Cisco Certified Network Associate (CCNA) certification exams. CSU

**CNT-125 Introduction to Virtualization Technology**
3 units LR
- 45 hours lecture/27 hours laboratory per term
- Recommended: CNT-118 or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

The course provides students with the knowledge and skills necessary to install and configure both Microsoft and VMWare Virtualization Technologies. Students will be introduced to storage systems, business continuity, storage security and management, virtualization technology and concepts. This course will cover deployment and administration of various operating systems, Hyper-V, Virtual machine networks. CSU

**CNT-138 Implementing and Managing Microsoft Exchange Server**
3 units LR
- 45 hours lecture/27 hours laboratory per term
- Recommended: CNT-116 or equivalent
- Note: Refer to course schedule for specific Exchange Server version. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course provides students with in-depth product information on the following topics: planning deployment and installing Exchange Server, architecture of Exchange Server, supporting Exchange Server in a single site or multi-site enterprise environment, establishing messaging connectivity over the Internet, and supporting Web access to Exchange Server computers through Microsoft Outlook Web Access. CSU

**CNT-140 Introduction to Information Systems Security**
4 units SC
- 54 hours lecture/54 hours laboratory per term
- Prerequisite: CNT-106 or equivalent
- Recommended: CNT-120 or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course provides an introduction to the fundamental principles and topics of information technology security and risk management at the organizational level. Hardware, software, processes, communications, applications, and policies and procedures with respect to organizational cybersecurity and risk management are addressed. Preparation for the CompTIA Security+ certification exams is provided. CSU
CNT-146  Cisco Certified Network Associate (CCNA) Security
2 units  SC
- 27 hours lecture/27 hours laboratory per term
- Recommended: CNT-140 or equivalent
- Note: Students may petition to repeat this course when software, hardware or certification requirements change. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course presents an in-depth study of network security principles as well as the tools and configurations required to secure a network focused specifically on preparation for the CCNA-Security certification exam. CSU

CNT-148  Introduction to Cybersecurity: Ethical Hacking
3 units  LR
- 36 hours lecture/54 hours laboratory per term
- Recommended: CNT-114 and CNT-146 or equivalents
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

Students will analyze computers and networks for vulnerabilities and to preserve information for forensic investigation. Laws pertaining to computer and network forensic investigation will be presented and students will complete case studies on cyber attack investigations. This course contributes to the preparation for the following certifications: AccessData Certified Examiner credential, Certified Information Systems Security Professional (CISSP), Cisco Certified Security Professional (CCSP), Security+, and Microsoft Security Certification. CSU

CNT-149  Digital Forensics Fundamentals
3 units  SC
- 36 hours lecture/54 hours laboratory per term
- Prerequisite: CNT-140 or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course is an introduction to the methods used to properly conduct a computer forensics investigation beginning with a discussion of ethics, while mapping to the objectives of the International Association of Computer Investigative Specialists (IACIS) certification. Topics covered include an overview of computer forensics as a profession; the computer investigation process; understanding operating systems boot processes and disk structures; data acquisition and analysis; technical writing; and a review of familiar computer forensics tools. CSU

CNT-150  Topics in Computer Networking
.3-.4 units  SC
- Variable hours
A supplemental course in computer networking to provide a study of current concepts and problems in networking. Specific topics will be announced in the schedule of classes. CSU

Computer science

Despina Prapavessi, Dean
Math and Computer Science Division
Math Building, Room 267

The computer science department offers courses in three general areas, each targeted to serve students with specific needs:
1. General education students seeking a computer literacy course that will transfer to both CSU and UC campuses and/or provide hands-on instruction in the use of personal computer for classroom and research needs (COMSC-101)
2. Computer science transfer students planning to major in computer science or computer engineering at a four-year school (COMSC-110, 165, 200, 210, 255, 260)
3. Information systems (programming) professionals who are seeking to update their skills, (COMSC-120, 121, 171, 172, 255, 256, 257)

Possible career opportunities
Study in computer science prepares students for careers in programming, computer operations, systems analysis and engineering, and web design, as well as artificial intelligence, robotics, and software engineering and development. Some career options require more than two years of college study.

Besides offering courses designed to meet lower-division requirements for a major in computer science, there is also a wide variety of courses covering current popular topics and new software development tools and languages. Such courses provide a path for working professionals to upgrade their skill-set and keep abreast with current technology.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.
Associate in science degree

Computer science

Students completing the program will be able to...

A. create computer programming solutions using either the C++ or Java programming language.
B. read and write programs written in x86 assembly language, and interface them with C++ programs.
C. effectively use either the C++ Standard Template Library or the Java util package to manage data structures in programs.
D. make the right choices of language, platform, data structures, and databases for a computer programming solution based on their knowledge of the elements of program design.

The associate in science in computer science is designed as a two-year curricular pathway that offers students a broad general education while integrating an in-depth study of computer science. Students will be prepared to assume entry-level positions in business and industry. Many of the courses are also applicable toward advanced levels of study. Students who intend to transfer to a four-year program in computer science should consult with a counselor regarding other mathematics and science requirements. To earn a degree, students must complete each course used to meet a major requirement with a “C” grade or higher, and complete all general education requirements as listed in the catalog. Certain courses may satisfy both major and other general education requirements; however, the units are only counted once.

major requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMSC-110 Introduction to Programming</td>
<td>4</td>
</tr>
<tr>
<td>COMSC-165 Advanced Programming with C and C++</td>
<td>4</td>
</tr>
<tr>
<td>COMSC-210 Program Design and Data Structures</td>
<td>4</td>
</tr>
<tr>
<td>COMSC-260 Assembly Language Programming/Computer Organization</td>
<td>4</td>
</tr>
</tbody>
</table>

In addition, the student must complete either:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMSC-200 Object Oriented Programming C++</td>
<td>4</td>
</tr>
<tr>
<td>or COMSC-255 Programming with Java</td>
<td>4</td>
</tr>
<tr>
<td>COMSC-256 Advanced Java Programming</td>
<td>4</td>
</tr>
</tbody>
</table>

total minimum required units = 20

Certificate of achievement

Computer science -

Advanced Java programming

Students completing the program will be able to...

A. create computer programming solutions using Java and GUI.
B. write multithreaded Java programs.

This program prepares students for a variety of programming positions and is especially suitable for students who have four-year degrees. To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher.

required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMSC-110 Introduction to Programming</td>
<td>4</td>
</tr>
<tr>
<td>COMSC-255 Programming with Java</td>
<td>4</td>
</tr>
<tr>
<td>COMSC-256 Advanced Java Programming</td>
<td>4</td>
</tr>
</tbody>
</table>

total minimum required units = 12

Certificate of achievement

Computer science -

Computer architecture

Students completing the program will be able to...

A. create computer programming solutions using C++.
B. read and write programs written in x86 assembly language, and interface them with C++ programs.

This program prepares students for a variety of programming positions and is especially suitable for students who have four-year degrees. To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher.

required courses:

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<tr>
<td>COMSC-110 Introduction to Programming</td>
<td>4</td>
</tr>
<tr>
<td>COMSC-165 Advanced Programming with C and C++</td>
<td>4</td>
</tr>
<tr>
<td>COMSC-260 Assembly Language Programming/Computer Organization</td>
<td>4</td>
</tr>
</tbody>
</table>

total minimum required units = 12
Certificate of achievement
Computer science -
Mobile and enterprise Java programming
Students completing the program will be able to...
A. create networked computer programming solutions using Java.
B. write Java programs involving sockets for TCP/IP network communications.
C. write Java programs involving Enterprise Java Beans.

This program prepares students for a variety of programming positions and is especially suitable for students who have four-year degrees. To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher.

required courses:               units
COMSC-110 Introduction to Programming.......................4
COMSC-255 Programming with Java .............................4
COMSC-257 Mobile and Enterprise Java Programming.........4

total minimum required units         12

Certificate of achievement
Computer science -
Program design
Students completing the program will be able to...
A. create computer programming solutions using C++ and the STL.
B. write custom C++ template classes to create and manage data structures.
C. evaluate algorithmic efficiency and express in “big oh”.

This program prepares students for a variety of programming positions and is especially suitable for students who have four-year degrees. To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher.

required courses:               units
COMSC-110 Introduction to Programming.......................4
COMSC-165 Advanced Programming with C and C++ ............4
COMSC-210 Programming Design and Data Structures .......4

total minimum required units         12

Certificate of achievement
Computer user support
Students completing the program will be able to...
A. apply the basic vocabulary of computer technology and information systems.
B. use word processing, spreadsheet, presentation, and database software to communicate effectively and professionally.
C. demonstrate basic mathematical skills in problem solving.
D. write instructions for using applications.

This program gives students the skills in computer programming, personal productivity applications, and data communications that they will need to succeed as a software support specialist in a typical office environment where administrative and financial management are supported by personal computers. To be successful the individual must have an understanding of the capabilities and limitations of microcomputers, be able to recommend personal productivity solutions to management, purchase and install standalone and networked microcomputers and software, write instructions for using applications, and provide training on new systems.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Certificate requirements may only be completed by attending a combination of day and evening classes.

required courses:               units
CNT-106 Introduction to Networks .............................3
COMSC-101 Computer Literacy ..................................4
COMSC-138 Advanced Microsoft Office Using Visual Basic for Applications (VBA)..........................2

plus at least 3 units from:

CNT-114 Microsoft Windows Operating System Essentials/Administration .........................3
COMSC-110 Introduction to Programming .......................4
COMSC-171 Introduction to UNIX and Linux ...................2
COMSC-172 UNIX and Linux Administration ...................2

total minimum required units         12

COMSC-101 Computer Literacy
4 units   SC
• 54 hours lecture/54 hours laboratory per term
• Formerly COMSC-100 and COMSC-100L combined

This introductory course in computer literacy covers the basics of computer hardware, software, and networking. Topics covered include local and cloud-based file management, productivity software for word processing, spreadsheets, databases, presentations, and home networks. An introduction to computer programming is presented. C-ID COMP 112, CSU, UC

COMSC-110 Introduction to Programming
4 units   SC
• 54 hours lecture/54 hours laboratory per term
• Prerequisite: Placement through the assessment process or MATH-090 or MATH-090E or MATH-090SP or equivalent
• Recommended: COMSC-101 or equivalent
• Note: See schedule of classes for programming language presented.

This course introduces students to programming concepts emphasizing modular design and development of programs, coding style, documentation, debugging and testing. All control structures and data types of a commonly used language are covered. C-ID COMP 112, CSU, UC
COMSC-120 SQL Programming
4 units SC
- 54 hours lecture/54 hours laboratory per term
- Recommended: COMSC-110 or ENGIN-135 or equivalent
- Note: Refer to schedule of classes for specific Oracle and SQLServer versions. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course covers the creation and maintenance of databases and tables. It also covers storage, retrieval and manipulation of data. Both Oracle and Microsoft SQLServer are covered, including Structured Query Language (SQL) script that is common to both, and product-specific variations. CSU

COMSC-121 Database Administration
4 units SC
- 54 hours lecture/54 hours laboratory per term
- Note: Refer to class schedule for specific Oracle and SQLServer versions. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course is designed to give the database administrator (DBA) a firm foundation in basic administrative tasks and provide the necessary knowledge and skills to set up, maintain, and troubleshoot a database. Both Oracle and Structured Query Language (SQL) Server are covered. CSU

COMSC-138 Advanced Microsoft Office Using Visual Basic for Applications (VBA)
2 units SC
- 27 hours lecture/27 hours laboratory per term
- Prerequisite: COMSC-100L or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course teaches advanced features of Microsoft Office Suite, including Word, Excel, PowerPoint and Access. This course teaches customization and automation using Visual Basic for Applications (VBA). Topics include application integration, advanced functions, creating interactive forms, pivot tables, the tools, properties, objects, and language syntax of VBA and much more. CSU

COMSC-150 Topics in Computer Science
.3-4 units SC
- Variable hours
- Note: May be repeated twice when software is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

A supplemental course in computer science to provide a study of current concepts and problems. Specific topics will be announced in the schedule of classes. CSU

COMSC-165 Advanced Programming with C and C++
4 units SC
- 54 hours lecture/54 hours laboratory per term
- Prerequisite: COMSC-110 or ENGIN-135 or equivalent

The course emphasizes programming techniques using C and C++ languages. The syntax of C will be reviewed, then advanced topics such as string processing, pointers, linked lists, queues, stacks, and dynamic memory allocation will be covered. C-ID COMP 122, CSU, UC

COMSC-171 Introduction to UNIX and Linux
2 units SC
- 27 hours lecture/27 hours laboratory per term

This is an introductory course in UNIX and Linux operating systems. This course covers scripting and the shell, access control, controlling processes, booting and shutting down, permissions, filesystems, utility programs, editors, use of network services, storage, AWK scripting, and X Window graphics. CSU, UC

COMSC-172 UNIX and Linux Administration
2 units SC
- 27 hours lecture/27 hours laboratory per term
- Recommended: COMSC-171 or equivalent

This course prepares the student to install, configure, and maintain a UNIX or Linux system. Topics include installation, booting, user management, hardware configuration, backup, package management, Transmission Control Protocol/Internet Protocol (TCP/IP) configuration, Dynamic Host Control Protocol (DHCP) servers configuration, Domain Name Server (DNS) server configuration, file server configuration, web server configuration, routing, packet filtering, and security. Course content will apply to all UNIX and Linux flavors. CSU

COMSC-200 Object Oriented Programming C++
4 units SC
- 54 hours lecture/54 hours laboratory per term
- Prerequisite: COMSC-165 or equivalent

This course provides detailed coverage of the concepts and syntax of the C++ Language. Topics include inheritance, overloaded operators, overloaded default operators, virtual functions, memory management, files, streams, templates, and exceptions. CSU, UC
COMSC-210 Program Design and Data Structures
4 units LR
• 54 hours lecture/54 hours laboratory per term
• Prerequisite: COMSC-165 or equivalent
• Recommended: COMSC-200 or equivalent
This course presents techniques relevant to program design and selection of data structures for larger programs. Topics include design techniques, effective use of recursion, algorithmic efficiency and O-notation, linked lists, binary trees, B-trees, graphs, sorting and searching techniques. Extensive programming of a variety of data structures is practiced. C-ID COMP 132, CSU, UC

COMSC-255 Programming with Java
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Recommended: COMSC-110 or equivalent
This course emphasizes programming techniques using the Java programming language. The syntax and deployment of Java applications are reviewed. Advanced topics such as objects, classes, methods, Object Oriented Programming (OOP) principles, Graphical User Interface (GUI), Input/Output (I/O), data structures, applets, networking, and threads are covered. CSU, UC

COMSC-256 Advanced Java Programming
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Recommended: COMSC-255 or equivalent
This course covers advanced topics in Java programming including multithreading, exception handling, serialization, reflection, model view controller architecture, Java beans, servlets and database connectivity. CSU, UC

COMSC-257 Mobile and Enterprise Java Programming
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Recommended: COMSC-255 or equivalent
The course covers Mobile and Enterprise programming concepts using the Java programming language. The Mobile programming topics include activities, services, broadcast receivers, content providers, telephony, text messaging and location services. The Enterprise programming concepts include Enterprise Java Beans (EJB’s), Session Beans, Entity Beans, Message Driven Beans, and Java Naming and Directory Services (JNDI). CSU

COMSC-260 Assembly Language Programming/Computer Organization
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Prerequisite: COMSC-165 or equivalent
This course covers the basics of machine architecture, machine language, assembly language, operating system interface, and interfacing with high level languages. Topics include data representation, instruction representation and execution, addressing, indexing, macros, subroutine linkages, storage and time efficiency issues, interrupt descriptor tables, virtual memory, cache memory, and dynamic address translation. C-ID COMP 142, CSU, UC

COMSC-275 Introduction to Web Programming Using PHP and JavaScript
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Recommended: COMSC-110 or equivalent
This is an introductory course that presents the basic concepts and applications of web programming. The course uses the JavaScript on the client side and PHP (Hypertext Preprocessor) on the server side and introduces the PHP language and covers the basics of the JavaScript language. HTML (Hyper Text Markup Language) and CSS (Cascading Style Sheets) are also reviewed. CSU

COMSC-276 Intermediate Web Programming Using PHP and MySQL
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Recommended: COMSC-275 or equivalent
This course presents the basic concepts and applications of server side web programming. PHP (Hypertext Preprocessor) is used as the server side programming language and MySQL as the database language. PHP language constructs are used to interface with the database. CSU

COMSC-277 Advanced Web Programming Using PHP
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Recommended: COMSC-275 or equivalent
This is an advanced web programming course that presents advanced concepts and application of both client and server side programming. The JavaScript language as the client side and PHP (Hypertext Preprocessor) as the server side programming language and MySQL as the database will be used. CSU
Construction

CONSTRUCTION – CONST

Tish Young, Dean
Physical Sciences and Engineering Division
Physical Sciences Building, Room 263

Possible career opportunities
Students completing a certificate in construction are qualified for positions in middle management in the building and construction inspection field, and in supervision for the construction industry.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Construction

Students completing the program will be able to...
A. interpret the codes related to the construction industry.
B. identify code-compliant construction in buildings.
C. identify types of zoning used in a jurisdiction.
D. write knowledgeable correction notices.
E. apply construction terminology.
F. identify the effects of various governmental agencies involved in the construction industry on a construction project.
G. interpret blueprints and specifications.

Upon successful completion of one of the areas of specialization, the student will have the necessary knowledge and skills for a career in building or construction inspection or for supervision responsibilities in the construction industry. This program is also valuable for those already employed in the field who wish to upgrade their skills.

To earn an associate in science degree with a major in construction, students must complete each course used to meet a major requirement with a “C” grade or higher and complete general education requirements as listed in the catalog. A student is eligible for graduation with an associate in science degree after the satisfactory completion of one of three areas of specialization, general education requirements and degree-applicable elective coursework for a total of 60 units. Degree requirements can be completed by attending classes in the day, the evening, or both. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer. DVC construction students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE).

Students are limited to one associate in science degree in construction regardless of the number of specializations completed. Multiple certificates of achievement may be awarded.

Construction and building inspection specialization

<table>
<thead>
<tr>
<th>major requirements</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONST-114 Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>CONST-124 Construction Details and Specifications</td>
<td>3</td>
</tr>
<tr>
<td>CONST-170 Fundamentals of Building Inspection</td>
<td>3</td>
</tr>
<tr>
<td>CONST-181 Building Code Interpretation: Non-Structural</td>
<td></td>
</tr>
<tr>
<td>CONST-182 Building Code Interpretation: Structural</td>
<td>3</td>
</tr>
<tr>
<td>CONST-183 Title 24: Energy Conservation Codes</td>
<td>3</td>
</tr>
<tr>
<td>CONST-191 Plumbing Code Interpretation</td>
<td>3</td>
</tr>
<tr>
<td>CONST-192 Mechanical Code Interpretation</td>
<td>3</td>
</tr>
<tr>
<td>CONST-266 Electrical Codes: Articles 90-398</td>
<td>3</td>
</tr>
<tr>
<td>CONST-267 Electrical Codes: Articles 400-830</td>
<td></td>
</tr>
<tr>
<td>CONST-273 Construction Management</td>
<td></td>
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</table>

Total minimum required units: 33

Construction and supervision and superintendency specialization

<table>
<thead>
<tr>
<th>major requirements</th>
<th>units</th>
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<tbody>
<tr>
<td>BUS-101 Business English</td>
<td>3</td>
</tr>
<tr>
<td>BUSMG-120 Introduction to Management Studies</td>
<td>3</td>
</tr>
<tr>
<td>BUSMG-121 Practices and Concepts of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>CONST-114 Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>CONST-116 Plane Surveying</td>
<td>4</td>
</tr>
<tr>
<td>CONST-124 Construction Details and Specifications</td>
<td>3</td>
</tr>
<tr>
<td>CONST-244 Estimating: Residential</td>
<td>3</td>
</tr>
<tr>
<td>CONST-245 Estimating: Commercial</td>
<td>3</td>
</tr>
<tr>
<td>CONST-273 Construction Management</td>
<td>3</td>
</tr>
<tr>
<td>CONST-276 Legal Aspects of the Construction Industry</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus at least 3 units from:

<table>
<thead>
<tr>
<th>major requirements</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONST-110 Occupational Safety</td>
<td>2</td>
</tr>
<tr>
<td>CONST-136 Construction Processes: Commercial</td>
<td>4</td>
</tr>
<tr>
<td>CONST-181 Building Code Interpretation: Non-Structural</td>
<td>3</td>
</tr>
<tr>
<td>CONST-295 Occupational Work Experience Education in CONST</td>
<td>1-4</td>
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</tbody>
</table>

Total minimum required units: 34
construction management specialization

major requirements:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHI-244</td>
<td>Architectural Practice and Working</td>
<td>3</td>
</tr>
<tr>
<td>MATH-120</td>
<td>Intermediate Algebra</td>
<td>5</td>
</tr>
<tr>
<td>PHYS-110</td>
<td>Elementary Physics</td>
<td>3</td>
</tr>
</tbody>
</table>

total minimum required units 38

Associate in science degree

Pre-apprenticeship

Students completing the program will be able to...

A. interpret blueprints and specifications.
B. apply construction terminology.
C. use currently available basic personal protective equipment and be able to select appropriate equipment for a given environment.
D. identify the most common sources of occupational injury and death.
E. apply principles of job site safety.
F. practice professional behavior on the construction site.
G. demonstrate a clear understanding of many trades interactions, interdependencies, and how the basic construction process flows from one trade to another.

This program prepares students for entry-level jobs in the building trades and/or entry into apprenticeship programs. Program content includes introduction to construction processes, occupational health and safety principles, and blueprint reading. In addition, the program provides contextualized math and English, physical education, a survey of trades, and college and workplace successes.

Upon completion of the program students will be able to directly enter the Northern California Laborers’ union, enter the Carpenters Training Committee for Northern California pre-apprenticeship program, or apply to a variety of apprenticeship programs, government agencies, and private-sector employers.

Students must complete each course used to meet a major requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the major. Students are advised that if they have previously completed equivalent or higher level English and/or math courses, these may be substituted for the degree requirements. Students are advised that entry into apprenticeship programs can be highly competitive and that many trades require documentation of at least one year of high school or one term of college algebra. Completion of higher levels of English and mathematics than are required by the degree are highly recommended.

Certificate of achievement

Construction and building inspection

Students completing the program will be able to...

A. interpret the codes related to the construction industry.
B. identify code-compliant construction in buildings.
C. identify types of zoning used in a jurisdiction.
D. write knowledgeable correction notices.
E. apply construction terminology.
F. identify the effects of various governmental agencies involved in the construction industry on a construction project.
G. interpret blueprints and specifications.

This program is designed to prepare students for a career in building or construction inspection, and it is also valuable for those already employed in the field who wish to upgrade their skills.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Certificate requirements can be completed by attending classes in the day, the evening, or both.

General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer. DVC construction students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE).

major requirements:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARER-140</td>
<td>Job Search Strategies</td>
<td>1</td>
</tr>
<tr>
<td>CONST-105</td>
<td>Survey of the Trades</td>
<td>1.5</td>
</tr>
<tr>
<td>CONST-110</td>
<td>Occupational Safety</td>
<td>2</td>
</tr>
<tr>
<td>CONST-114</td>
<td>Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>CONST-135</td>
<td>Construction Processes: Residential</td>
<td>4</td>
</tr>
<tr>
<td>CONST-215</td>
<td>Construction Job Site Training</td>
<td>2</td>
</tr>
<tr>
<td>KNACT-120</td>
<td>Fitness Training</td>
<td>0.5</td>
</tr>
<tr>
<td>ENGL-122</td>
<td>Freshman English: Composition and Reading</td>
<td>3</td>
</tr>
</tbody>
</table>

total minimum required units 20

Higher-level math may be substituted.
required courses:                 units
CONST-114  Blueprint Reading........................................... 3
CONST-124  Construction Details and Specifications................ 3
CONST-170  Fundamentals of Building Inspection..................... 3
CONST-181  Building Code Interpretation:
                   Non-Structural.............................................. 3
CONST-182  Building Code Interpretation: Structural................ 3
CONST-183  Title 24: Energy Conservation Codes...................... 3
CONST-191  Plumbing Code Interpretation................................ 3
CONST-192  Mechanical Code Interpretation................................ 3
CONST-266  Electrical Codes: Articles 90-398.......................... 3
CONST-267  Electrical Codes: Articles 400-830........................ 3
CONST-273  Construction Management.................................... 3

total minimum required units  33

Certificate of achievement
Construction management

Students completing the program will be able to...
A. estimate materials cost (quantity survey).
B. apply construction terminology.
C. schedule sequences of construction projects.
D. identify the effects of various governmental agencies involved in the construction industry on a construction project.
E. interpret blueprints and specifications.

This two-year program is designed to prepare students for positions in middle management or as technicians in the construction industry, working with a contractor, architect, engineer, or supplier and including such duties as material takeoff, estimating costs, purchasing, and timekeeping.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Certificate requirements can be completed by attending classes in the day, the evening, or both.

required courses:                 units
ARCHI-244  Architectural Practice and Working Drawings I......................... 3
BUS-101    Business English.................................................. 3
CONVSC-101 Computer Literacy.................................................. 3
CONST-135  Construction Processes: Residential......................... 4
CONST-136  Construction Processes: Commercial......................... 4
CONST-144  Materials of Construction........................................ 3
CONST-244  Estimating: Residential........................................... 3
CONST-273  Construction Management........................................ 3
CONST-276  Legal Aspects of the Construction Industry..................... 3
MATH-120   Intermediate Algebra............................................. 5
PHYS-110   Elementary Physics................................................ 3

total minimum required units  38

Certificate of achievement
Pre-apprenticeship

Students completing the program will be able to...
A. interpret blueprints and specifications.
B. apply construction terminology.
C. use currently available basic personal protective equipment and be able to select appropriate equipment for a given environment.
D. identify the most common sources of occupational injury and death.
E. apply principles of job site safety.
F. practice professional behavior on the construction site.
G. demonstrate a clear understanding of many trades, interactions, interdependencies, and how the basic construction process flows from one trade to another.

required courses:                 units
BUS-101    Business English.................................................. 3
BUSMG-120  Introduction to Management Studies........................ 3
BUSMG-121  Practices and Concepts of Supervision...................... 3
CONST-114  Blueprint Reading................................................. 3
CONST-116  Plane Surveying................................................... 4
CONST-124  Construction Details and Specifications...................... 3
CONST-244  Estimating: Residential........................................... 3
CONST-245  Estimating: Commercial.......................................... 3
CONST-273  Construction Management Studies............................ 3
CONST-276  Legal Aspects of the Construction Industry..................... 3

total minimum required units  31
This program prepares students for entry-level jobs in the building trades and/or entry into apprenticeship programs. Program content includes introduction to construction processes, occupational health and safety principles, and blueprint reading. In addition, the program provides contextualized math and English, physical education, a survey of trades, and college and workplace success.

Upon completion of the program students will be able to directly enter the Northern California Laborers’ union, enter the Carpenters Training Committee for Northern California pre-apprenticeship program, or apply to a variety of apprenticeship programs, government agencies, and private-sector employers.

The certificate of achievement requires completion of 21. The certificate of achievement requires completion of 20 units of study and certain courses also meet requirements of other construction degrees and certificates. Students must complete each course used to meet a certificate requirement with a “C” grade or higher. Students are advised that entry into apprenticeship programs can be highly competitive and that many trades require documentation of at least one year of high school or one term of college algebra. Completion of higher levels of English and mathematics than are required by the certificate are highly recommended. Students will enroll in CARER-140, CONST-105, CONST-135, CONST-215, and KNACT-120 as a cohort and complete these courses in one term.

**Certificate of accomplishment**

**Pre-apprenticeship**

Students completing the program will be able to...

A. interpret blueprints and specifications.
B. apply construction terminology.
C. use currently available basic personal protective equipment and be able to select appropriate equipment for a given environment.
D. identify the most common sources of occupational injury and death.
E. apply principles of job site safety.
F. practice professional behavior on the construction site.
G. demonstrate a clear understanding of many trades, interactions, interdependencies, and how the basic construction process flows from one trade to another.

This program prepares students for entry-level jobs in the building trades and/or entry into apprenticeship programs. Certain courses also meet requirements of other construction degrees and certificates. Students must complete each course with a “C” grade or higher.

**required courses:**

- **CARER-140** Job Search Strategies ........................................ 1
- **CONST-105** Survey of the Trades ........................................ 1.5
- **CONST-110** Occupational Safety ....................................... 2
- **CONST-114** Blueprint Reading ......................................... 3
- **CONST-135** Construction Processes: Residential ................. 4
- **CONST-215** Construction Job Site Training ......................... 2
- **KNACT-120** Fitness Training ......................................... 0.5

**plus at least 3 units from:**

- **ENGL-096** Introduction to College Reading and Study Skills ......................................................... 3
- **ENGL-097** Introduction to Integrated College Reading and Writing ...................................................... 5
- **ENGL-098** Introduction to College Writing .......................... 3

**total minimum required units** 11

* Higher-level math and English may be substituted.

**total minimum required units** 20

* Higher-level math and English may be substituted.
Construction

CONST-101 Exploring Construction, Architecture, Manufacturing, and Engineering
1 unit P/NP
- 18 hours lecture/22 hours laboratory per term
- Note: Field trips required.
This course provides an overview of employment trends, work attitudes, values, materials, processes, and career opportunities in construction, architecture, manufacturing, and engineering. Students will explore these topics through lecture and hands-on experience with high-tech equipment and processes, guest lectures, and field trips to industrial sites. CSU

CONST-105 Survey of the Trades
1.5 units SC
- 18 hours lecture/36 hours laboratory per term
- Note: This course is part of the career advancement academy construction trades program.
The course presents a survey of career opportunities and requirements of the skilled trades as well as basic theoretical and practical skills common to all construction trades. CSU

CONST-110 Occupational Safety
2 units SC
- 36 hours lecture/18 hours laboratory per term
- Note: Students meeting all course requirements will be eligible for a 30 hour OSHA Construction Safety Card. Students may petition to repeat when regulatory or industry standards change. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
This course covers the principles of health and safety in construction. Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) regulations and how they are applied to construction will be covered. CSU

CONST-114 Blueprint Reading
3 units SC
- 54 hours lecture per term
This course introduces the interpretation and development of blueprints for the building industry. CSU

CONST-116 Plane Surveying
4 units SC
- 54 hours lecture/54 hours laboratory per term
- Prerequisite: MATH-121 or equivalent
- Note: Same as ENGIN-140
This course covers the principles and practices of surveying including measurement of distances, directions and elevations; measuring standards; introduction to electronic measurements and metric units; calibration, systematic and random error analysis; traverse calculations; use and care of surveying instruments including tapes, transits and levels; GPS measurements; map reading; horizontal and vertical curves and mapping. CSU, UC

CONST-124 Construction Details and Specifications
3 units SC
- 54 hours lecture per term
Advanced study of construction detailing and specifications for building systems from foundations to roofs, including windows and doors, thermal and moisture protection, stairs and elevators and metal fabrications for wood frame, reinforced concrete, structural steel, and heavy timber buildings. Interpretation and sketching of details as well as an introduction to the general conditions for the construction contract. Techniques required to produce construction drawings and specifications conforming to current building codes and standards, including using manual drawing techniques and computer aided drafting. CSU

CONST-135 Construction Processes: Residential
4 units SC
- 54 hours lecture/54 hours laboratory per term
- Note: Credit by examination option available.
This course is an introduction to basic processes of the construction industry. Students will study light wood-frame construction and code requirements in residential construction. The areas of focus include quantity analysis, work activity sequencing and scheduling. CSU

CONST-136 Construction Processes: Commercial
4 units SC
- 54 hours lecture/54 hours laboratory per term
This course is an overview of the processes of heavy construction including review of the working plans/drawings, construction sites, layout, substructures, superstructures made of concrete, steel, masonry, and wood. CSU

CONST-144 Materials of Construction
3 units SC
- 54 hours lecture per term
This course introduces the performance characteristics of construction materials. Testing concepts and procedures, basic properties of metals, concrete, timber, masonry, and roofing materials with an emphasis on construction applications will also be covered. CSU

CONST-150 Topics in Construction
3-4 units SC
- Variable hours
A supplemental course in construction designed to provide a study of current concepts and problems in construction. Specific topics to be announced in the schedule of classes. CSU

CONST-170 Fundamentals of Building Inspection
3 units SC
- 54 hours lecture per term
This course is focused on basic construction inspection procedures and the inspector’s legal responsibilities. Topics to be covered include inspecting structures, occupancy types, safety, and proper record keeping. CSU
CONST-180 California Building Codes for Disability Access
3 units SC
• 54 hours lecture per term
This course provides an overview of building codes as they relate to disability access. Federal and State statutes, regulations, and case law associated with disability will also be covered. CSU

CONST-181 Building Code Interpretation: Non-Structural
3 units SC
• 54 hours lecture per term
This course provides an overview of the legal requirements associated with building inspection. Nonstructural plan check review, and inspection procedures for commercial and industrial buildings will also be covered. CSU

CONST-182 Building Code Interpretation: Structural
3 units SC
• 54 hours lecture per term
• Recommended: MATH-090 or MATH-090SP or MATH-090E or one year of high school algebra or equivalent
This course acquaints the student with legal requirements associated with building inspection. The development of code item checklists and structural plan reviews will also be covered. CSU

CONST-183 Title 24: Energy Conservation Codes
3 units SC
• 54 hours lecture per term
This course presents an overview of Title 24 energy conservation and energy compliance codes. The focus of the course is on building a plan inspection and construction field inspection. Energy projects, streamlining energy compliance forms review, case studies, and reviewing plan checking and building inspection procedures will also be covered. CSU

CONST-181 Plumbing Code Interpretation
3 units SC
• 54 hours lecture per term
• Note: Students may petition to repeat when code changes. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
This course covers the interpretation and application of codes and standards as they apply to construction of plumbing systems. CSU

CONST-192 Mechanical Code Interpretation
3 units SC
• 54 hours lecture per term
This course acquaints students with legal requirements associated with building inspections. The California Mechanical Code and other standards as they apply to heating, ventilation, and refrigeration will also be discussed. CSU

CONST-215 Construction Job Site Training
2 units SC
• 9 hours lecture/81 hours laboratory per term
• Note: Job site experiences are scheduled off-campus. Students must provide transportation to and from job sites.
This course provides students with real job site experience in the construction trades. Students will participate as individuals and/or in group projects with organizations such as Habitat for Humanity and other community organizations. CSU

CONST-244 Estimating: Residential
3 units SC
• 54 hours lecture per term
• Recommended: CONST-114 or CONST-135 or equivalent
This course will present the procedures for estimating materials, labor costs, time management, and bidding strategies for residential construction projects. CSU

CONST-245 Estimating: Commercial
3 units SC
• 54 hours lecture per term
• Recommended: CONST-114 and CONST-136 or equivalents
This course will present the procedures for estimating materials, labor costs, time management, and bidding strategies for commercial construction projects. CSU

CONST-266 Electrical Codes: Articles 90-398
3 units SC
• 54 hours lecture per term
• Note: Same as ELECT-266. Students may petition to repeat when code changes. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
This course covers the interpretation of the National Electrical Code (NEC) for general requirements, wiring and protection, wiring methods and materials (articles 90-398). Safety installation practices will be presented.
CONSTRUCTION

CONST-267 Electrical Codes: Articles 400-830
3 units SC
- 54 hours lecture per term
- Note: Same as ELECT-267. Students may petition to repeat when code changes. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course covers the interpretation of the National Electrical Code (NEC) for equipment for general use, special occupancies and special equipment (articles 400-830). Safety installation practices will be presented.

CONST-273 Construction Management
3 units SC
- 54 hours lecture per term

This course presents an introduction to administrative procedures, contracts, plans and specifications, schedules, diaries, inspections, report writing, and other forms of communication in the construction field. The different roles in construction management will also be discussed. CSU

CONST-276 Legal Aspects of the Construction Industry
3 units SC
- 54 hours lecture per term

This course provides a summary of the legal implications of the duties and responsibilities of a construction supervisor, superintendent, and contractor. The emphasis is on the practical aspects of legal theories, codes, and cases that are applied to the construction industry. Attention will also be given to contracts and their interpretations. CSU

CONST-295 Occupational Work Experience Education in CONST
1-4 units SC
- May be repeated three times
- Variable hours
- Note: In order to enroll in CONST-295, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

CONST-295 is supervised employment that extends classroom learning to the job site and relates to the student’s chosen field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Five hours work per week or seventy-five hours work per term is equal to one unit. Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

CONST-298 Independent Study
.5-3 units SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

CONST-299 Student Instructional Assistant
.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

COOPERATIVE EDUCATION – COOP

See work experience - WRKX

COUNSELING – COUNS

Beth Hauscarriague, Dean
Counseling Division
Student Services Center, Room 203

Possible career opportunities
Diablo Valley College’s counseling courses are designed to assist students in identifying educational and career goals, and enhancing their success through instruction in career and educational planning and student success strategies.

COUNS-075 Topics in College Readiness
.3-4 units P/NP
- Non degree applicable
- Variable hours

A supplemental course which provides a variety of topics for students preparing for college-level work. Specific topics will be announced in the schedule of classes.
COUNS-095 Educational Planning
0.3 unit  P/NP
• Non degree applicable
• 6 hours lecture per term
• Limitation on enrollment: Students must complete the
  online orientation and math and English assessments
  prior to enrolling in this course.
This course provides an introduction to educational goal setting and course selection. Students will develop a plan to succeed in achieving their educational goal. Topics will include identification of educational and career goals, academic assessment, counseling and advising services.

COUNS-096 Educational Planning for Student-Athletes
0.3 unit  P/NP
• Non degree applicable
• 6 hours lecture per term
• Limitation on enrollment: Students must complete the
  online orientation and math and English assessments
  prior to enrolling in this course.
An introduction to college for student-athletes, designed to provide students with a concrete plan for enrolling and succeeding in college. Topics include: overview of the higher education system in California, identification of educational and career goals, strategic use of student services, academic assessment, effective course selection and scheduling, geographical orientation, counseling and advising, NCAA, COA (Commission on Athletics) and DVC regulations as well as campus services for student-athletes will be emphasized.

COUNS-097 Educational Planning for DSS Students
0.3 unit  P/NP
• Non degree applicable
• 6 hours lecture per term
• Note: Submit disability documentation to the DSS office in SSC-248 prior to registering for this course.
Completion of English and mathematics assessment four days prior to this course will facilitate appropriate course selection.
This course provides an introduction to college for students with disabilities using course content tailored to meet the unique needs of this population. It will provide students in Disability Support Services (DSS) with a concrete plan for enrolling and succeeding in college. Topics include: an overview of DSS services and accommodations at Diablo Valley College (DVC), an explanation of the differences between high school and college, an overview of general information about certificate, associate degree and transfer pathways, and how to build a student educational plan.

COUNS-100 New Student Success Strategies
1 unit  SC
• 18 hours lecture per term
This course introduces new students to information, resources and skills necessary for college success. Topics will include educational opportunities, campus resources, study skills and strategies. The class also provides instruction in educational planning to reach certificate, degree and transfer goals. CSU

COUNS-120 Student Success
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents skills and strategies to succeed as a college student. Topics such as motivation and attitudes, time management, decision-making processes, goal-setting, critical thinking skills, study skills and interpersonal communication will be explored. Students will evaluate their own skills and behaviors in relation to these topics and learn strategies to make meaningful choices about their education, career and personal goals. CSU, UC (credit limits may apply to UC - see counselor)

COUNS-130 Transfer Planning
1.5 units  SC
• 27 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
Through this course students will research, evaluate and develop a transfer plan that is well organized and specific to the individual's life circumstance and educational goals. Students explore the world of transfer from academic, financial, and personal development perspectives. A key component of this course is learning research skills and strategies using a variety of techniques to find, retrieve and evaluate transfer planning information to create a personal education plan. CSU

COUNS-150 Topics in Counseling
0.3-4 units  SC
• Variable hours
A supplemental course designed to provide personal and social development skills related to academic issues. Specific topics will be announced in the schedule of classes. CSU

COUNS-155 Topics in Group Counseling
0.3-4 units  SC
• Variable hours
An interpersonal experience designed to develop self-awareness and to increase understanding of and competence in interpersonal relationships. CSU
CULINARY ARTS – CULN

Despina Prapavessi, Dean
Business Division
Math Building, Room 267

Possible career opportunities

The culinary arts program provides professional training for employment as a chef, culinary supervisor, cookbook author, recipe taster, cook, kitchen manager, food server, caterer, food researcher, banquet chef, dining room manager, food stylist, menu planner, community nutrition specialist, and school foodservice specialist.

The baking program is designed to prepare students to work as pastry chefs in local restaurants, hotels, resorts, bakeries, and catering establishments. Career options include bakery production finisher, pastry decorator, caterer, baker assistant, bakery entrepreneur, and bakery chef at grocery food chains, cafes, restaurants, bakeries, hospitals, resorts, child care facilities, cafeterias, food preparation centers, and catering facilities.

The restaurant management program prepares students to enter the restaurant field as a manager-trainee in a food service establishment. Career options include: restaurant owner/operator, hotel banquet manager, dining room manager, purchasing specialist, catering manager, and food editor. Some career options may require more than two years of college study.

Program-level student learning outcomes

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree Hospitality studies -
Culinary arts

Students completing the program will be able to...
A. demonstrate an understanding of the criteria for excellence in purchasing food, preparing food, and presenting food for service.
B. demonstrate teamwork in planning, purchasing, preparing and presenting food for service.
C. demonstrate and describe the differences in producing foods for large events vs. a la carte dining.

Associate in science degree Hospitality studies -
Restaurant management

Students completing the program will be able to...
A. demonstrate an understanding of the criteria for proper service techniques used in the culinary industry.
B. demonstrate teamwork, planning, purchasing, production and service.
C. pursue opportunities available in California's hospitality and culinary industry.

The associate in science degree in hospitality studies prepares students for entry into mid-level employment in one of three specialty areas of the hospitality and culinary arts industry: baking and pastry, culinary arts, restaurant management. This in-depth, hands-on, American Culinary Federation (ACF) accredited program of study prepares students for a professional hospitality and culinary career in a broad scope of industry opportunities in the following areas of specialization:

The DVC Culinary Program has been successfully preparing students for professional careers for the past 40 years.

Baking and pastry:
DVC has been placing students in small and large bakeries, specialty pastry shops, catering and dessert preparation in restaurants. Diablo Valley College’s baking and pastry program offers an in-depth, hands-on learning curriculum where students gain both knowledge and experience through the hotel and restaurant management program’s technical facilities. In addition to training at the DVC facilities, students gain experience working outside the college through a required internship program. DVC’s associate degree in hospitality studies with a specialization in baking and pastry is designed primarily for those students who desire to complete a two-year degree. General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer. Students who are interested in pursuing a management-focused program in hospitality should see a counselor and consider the General Education Requirements Options 2 or 3.
Culinary arts:
Diablo Valley College’s culinary arts program offers an in-depth, hands-on learning curriculum where students gain both knowledge and experience through the hotel and restaurant management program's technical facilities. In addition to training at the DVC facilities, students gain experience working outside the college through a required internship program. DVC’s associate degree in hospitality studies with a specialization in culinary arts is designed primarily for those students who desire to complete a two-year degree. General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer. Students who are interested in pursuing a management-focused program in hospitality should see a counselor and consider the General Education Options 2 or 3.

Restaurant management:
Diablo Valley College’s restaurant management program offers an in-depth, hands-on learning curriculum where students gain both knowledge and experience through the hotel and restaurant management program’s technical facilities. Restaurant management students work and learn in a fully equipped food production kitchen, a demonstration laboratory, a retail pastry shop and a 60-seat restaurant that is open to the public. In addition to training at the DVC facilities, students gain experience working outside the college through a required internship program. DVC’s associate degree in hospitality studies with a specialization in restaurant management is geared primarily towards DVC’s culinary students desiring some additional management coursework. Students who are interested in pursuing a management-focused program in hospitality should expect to complete a four-year degree program at a university. These students should see a counselor and consider the General Education Requirements Options 2 or 3.

Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file in the Culinary Department Office by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. To earn an associate in science degree, students must complete each course used to meet a certificate requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the degree.

Students are limited to one associate in science degree regardless of the number of specializations completed. Multiple certificates may be awarded.

major requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULN-105</td>
<td>Introduction to the Kitchen</td>
<td>0.5</td>
</tr>
<tr>
<td>CULN-110</td>
<td>Orientation to Hospitality</td>
<td>3</td>
</tr>
<tr>
<td>CULN-115</td>
<td>Culinary Mathematics</td>
<td>1.5</td>
</tr>
<tr>
<td>CULN-120</td>
<td>Fundamentals of Cuisine</td>
<td>5</td>
</tr>
<tr>
<td>CULN-153</td>
<td>Safety and Sanitation</td>
<td>2</td>
</tr>
<tr>
<td>CULN-185</td>
<td>Nutritional Guidelines in Food Preparation</td>
<td>2</td>
</tr>
<tr>
<td>CULN-192</td>
<td>Purchasing Operations and Systems Laboratory</td>
<td></td>
</tr>
<tr>
<td>CULN-193</td>
<td>Inventory and Ordering Systems Laboratory</td>
<td>0.3</td>
</tr>
<tr>
<td>CULN-195</td>
<td>Supervisory Management in Food Service</td>
<td>3</td>
</tr>
<tr>
<td>CULN-224</td>
<td>Catering Business and Operations</td>
<td>2</td>
</tr>
</tbody>
</table>

plus at least 2 units from one of the following courses:

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULN-295</td>
<td>Occupational Work Experience</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education in CULN</td>
<td>2-4</td>
</tr>
<tr>
<td>CULN-296</td>
<td>Internship in Occupational Work</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experience Education in CULN</td>
<td>2-4</td>
</tr>
<tr>
<td>CULN-298</td>
<td>Independent Study</td>
<td>2-3</td>
</tr>
<tr>
<td>CULN-299</td>
<td>Student Instructional Assistant</td>
<td>2-3</td>
</tr>
</tbody>
</table>

plus at least 1 unit from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULN-230A</td>
<td>Culinary Competition I</td>
<td>0.5</td>
</tr>
<tr>
<td>CULN-230B</td>
<td>Culinary Competition II</td>
<td>0.5</td>
</tr>
<tr>
<td>CULN-235A</td>
<td>On-Campus Catering I</td>
<td>0.5-1</td>
</tr>
<tr>
<td>CULN-235B</td>
<td>On-Campus Catering II</td>
<td>0.5-1</td>
</tr>
</tbody>
</table>

plus at least 1.5 units from:

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULN-240A</td>
<td>On-Campus Catering I</td>
<td>0.5-1</td>
</tr>
<tr>
<td>CULN-240B</td>
<td>On-Campus Catering II</td>
<td>0.5-1</td>
</tr>
<tr>
<td>CULN-240C</td>
<td>On-Campus Catering III</td>
<td>0.5-1</td>
</tr>
</tbody>
</table>

Choose one of the following three specialization areas:

baking and pastry

required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULN-181</td>
<td>Fundamental Techniques of Baking and Pastry</td>
<td>6.5</td>
</tr>
<tr>
<td>CULN-281</td>
<td>Advanced Techniques of Baking and Pastry</td>
<td></td>
</tr>
</tbody>
</table>

plus at least 2 units from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULN-129</td>
<td>Introduction to Urban Farming</td>
<td></td>
</tr>
<tr>
<td>CULN-186</td>
<td>Sustainable Hospitality - Energy, Water and Waste</td>
<td>1</td>
</tr>
<tr>
<td>CULN-210</td>
<td>Artisan Bread</td>
<td>1</td>
</tr>
<tr>
<td>CULN-212</td>
<td>Candies, Chocolates and Truffles</td>
<td>1</td>
</tr>
<tr>
<td>CULN-213</td>
<td>Seasonal Spring Desserts</td>
<td>1</td>
</tr>
<tr>
<td>CULN-214</td>
<td>Seasonal Fall Desserts</td>
<td>1</td>
</tr>
<tr>
<td>CULN-215</td>
<td>Decorative Confectionary Showpieces</td>
<td></td>
</tr>
</tbody>
</table>

total minimum required units-baking and pastry 41.3

culinary arts

required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULN-127</td>
<td>Garde Manger</td>
<td>2</td>
</tr>
<tr>
<td>CULN-154</td>
<td>Menu Development and Planning</td>
<td>2</td>
</tr>
<tr>
<td>CULN-167</td>
<td>Restaurant Operations in the Dining Room</td>
<td>3</td>
</tr>
<tr>
<td>CULN-175</td>
<td>Meat, Poultry and Fish Fabrication</td>
<td>2</td>
</tr>
<tr>
<td>CULN-220</td>
<td>Advanced Cuisine</td>
<td>5</td>
</tr>
</tbody>
</table>

plus at least 1.5 units from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULN-161</td>
<td>Baking for Culinary Students</td>
<td>1.5</td>
</tr>
<tr>
<td>CULN-181</td>
<td>Fundamental Techniques of Baking and Pastry</td>
<td></td>
</tr>
</tbody>
</table>

plus at least 2 units from:

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<tbody>
<tr>
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<td>Introduction to Urban Farming</td>
<td></td>
</tr>
<tr>
<td>CULN-160</td>
<td>Fundamentals of Beverage, Wine and Spirits</td>
<td>3</td>
</tr>
<tr>
<td>CULN-186</td>
<td>Sustainable Hospitality - Energy, Water and Waste</td>
<td>1</td>
</tr>
</tbody>
</table>

total minimum required units-culinary arts 43.8
Culinary arts

restaurant management

required courses: units
BUSAC-181 Applied Accounting............................. 3
CULN-154 Menu Development and Planning................ 2
CULN-160 Fundamentals of Beverage, Wine and Spirits ......................................................... 3
CULN-167 Restaurant Operations in the Dining Room..... 3
CULN-201 Principles of Food, Beverage, and Cost Controls ......................................................... 3
CULN-216 Food and Wine Pairing................................1.5

plus at least 1.5 units from:
CULN-161 Baking for Culinary Students..................... 1.5
CULN-181 Fundamental Techniques of Baking and Pastry ............................................................... 6.5

total minimum required units for restaurant management 43.3

Certificate of achievement
Baking and pastry

Students completing the program will be able to...
A. explain and apply baking/pastry terms and procedures appropriately.
B. select, organize, and analyze ingredients used in baking and pastry production.
C. select, recognize, and utilize equipment and tools used in baking and pastry production.
D. scale and measure ingredients properly.
E. produce an array of bakery and pastry products.
F. evaluate quality standards in bakery and pastry products in written and oral form.

This in-depth training program prepares students for many entry-level positions in small and large bakeries, specialty pastry shops, dessert catering, and dessert preparation in restaurants. Our graduates enter the baking and pastry field and many have started their own businesses.

Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file in the Culinary Department Office by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Certificate requirements may only be completed by attending a combination of day and evening classes.

required courses: units
CULN-105 Introduction to the Kitchen ......................... 0.5
CULN-110 Orientation to Hospitality .......................... 3
CULN-115 Culinary Mathematics ............................ 1.5
CULN-120 Fundamentals of Cuisine .......................... 5
CULN-153 Safety and Sanitation ............................... 2
CULN-181 Fundamental Techniques of Baking and Pastry ................................................................. 6.5
CULN-185 Nutritional Guidelines in Food Preparation ... 2
CULN-192 Purchasing Operations and Systems Laboratory ........................................................... 2.5

CULN-193 Inventory and Ordering Systems Laboratory ... 0.3
CULN-195 Supervisory Management in Food Service ................................................................. 3
CULN-224 Catering Business and Operations ................ 2
CULN-281 Advanced Techniques of Backing and Pastry ................................................................. 6.5

plus at least 2 units from:
CULN-129 Introduction to Urban Farming:
  Farm-to-Table .................................................. 1
CULN-186 Sustainable Hospitality - Energy, Water, and Waste ..................................................... 1
CULN-210 Artisan Bread ........................................... 1
CULN-212 Candies, Chocolates and Truffles ................. 1
CULN-213 Seasonal Spring Desserts .......................... 1
CULN-214 Seasonal Fall Desserts .............................. 1
CULN-215 Decorative Confectionary Showpieces ......... 1

plus at least 1 unit from:
CULN-230A Culinary Competition I .......................... 0.5
CULN-230B Culinary Competition II .......................... 0.5
CULN-235A On-Campus Catering I ......................... 0.5-1
CULN-235B On-Campus Catering II ......................... 0.5-1

plus at least 1.5 units from:
CULN-240A On-Campus Catering I .......................... 0.5-1
CULN-240B On-Campus Catering II ......................... 0.5-1
CULN-240C On-Campus Catering III ....................... 0.5-1

plus at least 2 units from one of the following courses:
CULN-295 Occupational Work Experience Education in CULN ................................................. 2-4
CULN-296 Internship in Occupational Work Experience Education in CULN ................................. 2-4
CULN-298 Independent Study .................................. 2-3
CULN-299 Student Instructional Assistant ................. 2-3

total minimum required units 41.3

Certificate of achievement
Culinary arts

Students completing the program will be able to...
A. demonstrate the proper application of dry, moist, and combination cooking methods to a variety of food products.
B. demonstrate current Food Service sanitation procedures.
C. serve food according to professional industry standards.
D. calculate costs and apply procedures in order to run a cost effective food service establishment.
E. create menus that incorporate menu planning principles that maximize sales and profits.
F. produce a variety of bakery products using standard baking procedures and evaluate the products based on method, timing, appearance, texture, cell structure and overall eating.
G. demonstrate the ability to work as an effective member of a production team.
This in-depth, hands-on training program prepares students for a professional culinary career. Our certificate program is accredited by the American Culinary Federation Educational Institute, a national organization of professional chefs. Our graduates enter the culinary field and many have progressed to the position of executive chef.

Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file in the Culinary Department Office by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Certificate requirements may only be completed by attending a combination of day and evening classes.

required courses: units

- CULN-105 Introduction to the Kitchen .............................................. 0.5
- CULN-110 Orientation to Hospitality .................................................. 3
- CULN-115 Culinary Mathematics ....................................................... 1.5
- CULN-120 Fundamentals of Cuisine .................................................... 5
- CULN-127 Garde Manger ................................................................. 2
- CULN-153 Safety and Sanitation ......................................................... 2
- CULN-154 Menu Development and Planning ...................................... 2
- CULN-167 Restaurant Operations in the Dining Room ..................... 3
- CULN-175 Meat, Poultry and Fish Fabrication .................................... 2
- CULN-185 Nutritional Guidelines in Food Preparation ...................... 2
- CULN-192 Purchasing Operations and Systems Laboratory ............. 2.5
- CULN-193 Inventory and Ordering Systems Laboratory .................. 0.3
- CULN-195 Supervisory Management in Food Service ..................... 3
- CULN-220 Advanced Cuisine ........................................................... 5
- CULN-224 Catering Business and Operations .................................. 2

plus at least 1.5 units from:

- CULN-161 Baking for Culinary Students .......................................... 1.5
- CULN-181 Fundamental Techniques of Baking and Pastry ................. 6.5

plus at least 2 units from:

- CULN-129 "Introduction to Urban Farming: Farm-to-Table" .............. 1
- CULN-160 Fundamentals of Beverage, Wine and Spirits ................. 3
- CULN-166 Sustainable Hospitality - Energy, Water and Waste ........ 1

plus at least 1 unit from:

- CULN-230A Culinary Competition I ............................................... 0.5
- CULN-230B Culinary Competition II ............................................. 0.5
- CULN-235A On-Campus Catering I .............................................. 0.5-1
- CULN-235B On-Campus Catering II .............................................. 0.5-1

plus at least 1.5 units from:

- CULN-240A On-Campus Catering I .............................................. 0.5-1
- CULN-240B On-Campus Catering II .............................................. 0.5-1
- CULN-240C On-Campus Catering III .............................................. 0.5-1

plus at least 2 units from one of the following courses:

- CULN-295 Occupational Work Experience.................................... 2-4
- CULN-296 Education in CULN....................................................... 2-4
- CULN-298 Independent Study ......................................................... 2-3
- CULN-299 Student Instructional Assistant ....................................... 2-3

total minimum required units 43.8

Certificate of achievement

Restaurant management

Students completing the program will be able to...

A. explain factors that determine quality food.
B. explain and list both the advantages and disadvantages comparing full service to buffet service.
C. plan, organize, setup and serve special events for 100-150 guests.
D. calculate cost and apply procedures in order to run a cost effective food service establishment.

Our in-depth, hands-on training program prepares students to begin their careers in restaurant management. Our graduates enter the hospitality industry and many progress to management positions.

Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file in the Culinary Department Office by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Certificate requirements may only be completed by attending a combination of day and evening classes.

required courses: units

- BUSAC-181 Applied Accounting ..................................................... 3
- CULN-105 Introduction to the Kitchen ............................................. 0.5
- CULN-110 Orientation to Hospitality .............................................. 3
- CULN-115 Culinary Mathematics ..................................................... 1.5
- CULN-120 Fundamentals of Cuisine ................................................ 5
- CULN-123 Food and Wine Pairing ................................................... 2
- CULN-125 Safety and Sanitation ..................................................... 2
- CULN-129 Principles of Food, Beverage, and Cost Controls ............ 3
- CULN-160 Fundamentals of Beverage, Wine and Spirits ................. 3
- CULN-167 Restaurant Operations in the Dining Room ................. 3
- CULN-185 Nutritional Guidelines in Food Preparation ................. 3
- CULN-192 Purchasing Operations and Systems Laboratory ........... 2.5
- CULN-193 Inventory and Ordering Systems Laboratory .................. 0.3
- CULN-195 Supervisory Management in Food Service ..................... 3
- CULN-201 Principles of Food, Beverage, and Cost Controls ............ 3
- CULN-216 Food and Wine Pairing ................................................... 1.5
- CULN-224 Catering Business and Operations ................................ 2
Culinary arts

**plus at least 1.5 units from:**
- CULN-181 Baking for Culinary Students
- CULN-181 Fundamental Techniques of Baking and Pastry

**plus at least 1 unit from:**
- CULN-230A Culinary Competition I
- CULN-230B Culinary Competition II
- CULN-235A Off-Campus Catering I
- CULN-235B Off-Campus Catering II

**plus at least 1.5 units from:**
- CULN-240A On-Campus Catering I
- CULN-240B On-Campus Catering II
- CULN-240C On-Campus Catering III

**plus at least 2 units from one of the following courses:**
- CULN-295 Education in CULN
- CULN-296 Internship in Occupational Work
- CULN-298 Independent Study
- CULN-299 Student Instructional Assistant

**total minimum required units** 43.3

*Note: DVC's restaurant management certificate is geared primarily toward DVC's culinary students desiring some additional management coursework. Students who are interested in pursuing a management-focused program in hospitality should expect to complete a four-year degree program at a university.*

**CULN-100 Exploring Careers in the Hospitality and Culinary Industry**

1 unit SC
- 18 hours lecture/20 hours laboratory per term
- Prerequisite: CULN-105 or equivalent

This course will introduce students to the requirements of the culinary arts program with an emphasis on hygiene, safety, and kitchen equipment knowledge. It is specifically designed for students with no familiarity with standard culinary protocols. CSU

**CULN-105 Introduction to the Kitchen**

.5 unit SC
- 27 hours laboratory per term
- Prerequisite: CULN-153 (may be taken previously) or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting. Credit by examination option available.

This course introduces students to the requirements of the culinary arts program with an emphasis on hygiene, safety, and kitchen equipment knowledge. It is specifically designed for students with no familiarity with standard culinary protocols. CSU

**CULN-110 Orientation to Hospitality**

8 units SC
- 54 hours lecture per term
- Prerequisite: CULN-105 or equivalent
- Note: Credit by examination option available.

This course provides an introduction to career opportunities in the food service industry, explores trade publications and professional organizations, and presents the basic organization and function of departments within hospitality and food service establishments. CSU

**CULN-115 Culinary Mathematics**

1.5 units LR
- 27 hours lecture per term

This course focuses on the application of math competencies to specific business situations in the food service industry. CSU

**CULN-120 Fundamentals of Cuisine**

5 units SC
- 270 hours laboratory per term
- Prerequisite: CULN-105 or equivalent
- Co-requisite: CULN-153 (may be taken previously) or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This course focuses on the practical development of fundamental student skills in knife, tool and culinary equipment handling and introduces basic food preparation per American Culinary Federation (ACF) standards. Students will develop a working knowledge of laws and regulations relating to food safety, personal safety, and maintain proper sanitation in the kitchen. The emphasis is on professional skills required by quantity food service. CSU
CULN-123  Sauces of the World
1 unit  LR
- 9 hours lecture/27 hours laboratory per term
- Prerequisite: CULN-105 and CULN-153 or equivalents
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the Culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms. See instructor at the first class meeting.

This course introduces the preparation of mother sauces, stocks, soups, classical sauces, contemporary sauces, accompaniments, and the pairing of sauces with a variety of foods. CSU

CULN-127  Garde Manger
2 units  SC
- 18 hours lecture/54 hours laboratory per term
- Prerequisite: CULN-120 or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

A study of the artistic side of cold food preparation from basic garnishes to advanced forcemeat preparations such as gallantines, pates and mousses with an emphasis on decorated platters and other preparations appropriate for buffet service. CSU

CULN-129  Introduction to Urban Farming: Farm-to-Table
1 unit  SC
- 9 hours lecture/27 hours laboratory per term
- Note: Class meets on-campus at Rodger Ranch Urban Farm in Pleasant Hill.

This course introduces students growing food for restaurants and useful for anyone who wants to grow their own food. Topics include soil preparation, planting, and organic gardening and farming techniques. Nutrition, menu planning, as well as organic and sustainable practices are also covered. CSU

CULN-153  Safety and Sanitation
2 units  SC
- 36 hours lecture per term
- Note: Credit by examination option available.

This course presents the basic principles of safety and sanitation and their application in food service operations. Effective personal hygiene habits and food handling practices for the protection of consumers are reinforced. This course must be taken before or concurrently with the first culinary laboratory course (CULN-120 or CULN-181). CSU

CULN-154  Menu Development and Planning
2 units  SC
- 36 hours lecture per term
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This course provides students with an opportunity to plan and develop basic menus, focusing on techniques and flavors typical of a variety of food service establishments. Healthy menus, culturally diverse menus, seasonal and regional menus are addressed. CSU

CULN-160  Fundamentals of Beverage, Wine and Spirits
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course provides a comprehensive study of beverage service operations and control. Topics include basic production, types of beer, wine, and spirits, merchandising, and regulations concerning service of alcoholic and non-alcoholic beverages, including coffee and tea. CSU

CULN-161  Baking for Culinary Students
1.5 units  SC
- 9 hours lecture/54 hours laboratory per term
- Prerequisite: CULN-105 or equivalent and CULN-153 (may be taken concurrently) or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This course provides an applied and theoretical study of basic principles of commercial baking as practiced in hotels, restaurants, and retail bakeries. CSU
Culinary arts

CULN-167 Restaurant Operations in the Dining Room
3 units SC
- 162 hours laboratory per term
- Co-requisite: CULN-153 (may be taken previously) or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary office by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This course provides students with practical experience in the fundamentals of dining room service, including rules and styles of service, various forms of food service, and basic dining room management and planning. CSU

CULN-175 Meat, Poultry and Fish Fabrication
2 units SC
- 36 hours lecture per term
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This course provides students with a comprehensive overview of the meat identification process, including cuts, buying and ordering procedures, nutrition data, food safety and storage, and USDA grading standards. CSU

CULN-181 Fundamental Techniques of Baking and Pastry
6.5 units SC
- 36 hours lecture/243 hours laboratory per term
- Prerequisite: CULN-105 and CULN-153 (may be taken concurrently) or equivalents
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.
- Formerly CULN-180 and CULN-150R

This course presents both practical and theoretical study of fundamental principles of commercial baked goods and pastry production. Students will have extensive hands-on experience in baking techniques to produce commercial quality products in quantity. CSU

CULN-185 Nutritional Guidelines in Food Preparation
2 units SC
- 36 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course provides an introduction to food composition, dietary guidelines, recipe modification, food cooking and storage techniques for nutrient retention. Contemporary nutritional issues will be addressed. CSU

CULN-186 Sustainable Hospitality-Energy, Water and Waste
1 unit SC
- 18 hours lecture per term

This course presents current information on energy efficiency, water efficiency, and waste to ensure efficient, environmentally sustainable operations in food service. Students will practice decision-making regarding these issues based on science and economics to optimize sustainability and profitability. CSU

CULN-192 Purchasing Operations and Systems Laboratory
2.5 units SC
- 135 hours laboratory per term
- Co-requisite: CULN-193 (may be taken previously) and CULN-193 or equivalents
- Recommended: CULN-115 or MATH-090 and eligibility for ENGL-122 or equivalents
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary office by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This course presents current practices in foodservice purchasing, receiving, storage, issuance, and documentation. This course is appropriate for entry level students and presents product identification and evaluation, as well as the organization of a professional foodservice operation. CSU

CULN-193 Inventory and Ordering Systems Laboratory
.3 unit LR
- 18 hours laboratory by arrangement per term
- Prerequisite: CULN-153 or equivalent
- Co-requisite: CULN-192 or equivalent
- Note: Each student will be assigned to an ordering team which meets either M, T, W or TH from 2-3:30pm. See instructor for details. Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

In this course, students will learn to order food products for a commercial enterprise, analyze inventory, and utilize specifications, proper pack size, and par levels as needed. CSU

CULN-195 Supervisory Management in Food Service
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course focuses on the application of management principles of supervision to specific business contexts within the food service industry. CSU
CULN-201  Principles of Food, Beverage, and Cost Controls

3 units  SC
• 54 hours lecture per term
This course prepares students to apply cost control measures in restaurant and beverage management. Key principles and concepts are presented and cost control strategies are presented for each phase of beverage and food service operations. CSU

CULN-210  Artisan Bread

1 unit  SC
• 9 hours lecture/27 hours laboratory per term
• Prerequisite: CULN-105 and CULN-153 or equivalents
• Recommended: CULN-161 or CULN-181 or equivalent
• Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.
This course is designed to expose students to the theory and techniques used in the baking of artisan breads, including but not limited to: baguettes, sourdoughs, whole wheat, multigrain, rye, pan and egg breads. CSU

CULN-212  Candies, Chocolates and Truffles

1 unit  SC
• 9 hours lecture/27 hours laboratory per term
• Prerequisite: CULN-105 and CULN-153 or equivalents
• Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.
This course provides skill development in the production of a variety of candies and chocolates specific to the confectionery industry. Topics include brittle, toffees, meringues, truffles, and bonbons. CSU

CULN-213  Seasonal Spring Desserts

1 unit  SC
• 9 hours lecture/27 hours laboratory per term
• Recommended: Eligibility for ENGL-116 and ENGL-118 or equivalents
• Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.
This course presents a practical study of basic pastries, their components, and desserts, specific to the spring season as appropriate for hotels, restaurants, wholesale and retail bakeries/pastry shops. CSU

CULN-214  Seasonal Fall Desserts

1 unit  SC
• 9 hours lecture/27 hours laboratory per term
• Recommended: Eligibility for ENGL-116 and ENGL-118 or equivalents
• Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.
This course presents a practical study of basic pastries, their components, and desserts, specific to the fall season as appropriate for hotels, restaurants, wholesale and retail bakeries/pastry shops. CSU

CULN-215  Decorative Confectionary Showpieces

1 unit  SC
• 9 hours lecture/27 hours laboratory per term
• Recommended: CULN-181 or equivalent
• Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.
This course presents theory and production techniques of advanced confectionery showpieces including: chocolate, marzipan, sugar, Isomalt, pastillage, and royal icing. CSU

CULN-216  Food and Wine Pairing

1.5 units  SC
• 27 hours lecture per term
• Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.
This course presents the history and geographical distribution of wine production. The pairing of wines with food will be emphasized. CSU

CULN-220  Advanced Cuisine

5 units  SC
• 270 hours laboratory per term
• Prerequisite: CULN-120 or equivalent
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening and a California Food Handlers Certificate on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.
This course builds on skills developed in the fundamentals of cuisine course (CULN-120), emphasizing preparation of individual plates. Seasonal cooking and market variations, healthy cooking, curing meats, preparing flavored oils and dressings, and composition of effective menu items are integrated into the food preparation activities. Students will develop basic supervisor and kitchen management skills. CSU
Culinary arts

CULN-224 Catering Business and Operations
2 units SC
- 36 hours lecture per term
This course provides an introduction to operating a catering business. Topics discussed will include effective client relations, event planning, pricing and cost controls, legal issues, and equipment requirements. Menu planning for a variety of events such as banquets, and plated events will also be covered. CSU

CULN-228 International Cuisine
2 units SC
- 27 hours lecture/27 hours laboratory per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This course presents an introduction to cuisines from around the world using cultural, social and historical frameworks. Emphasis will be on cultural contrast that reflects the ethnic culinology of at least three non-European countries. The importance of ethnic cuisine in today's multicultural society and its significance and influence on North American culture will also be discussed. CSU

CULN-230A Culinary Competition I
.5 unit SC
- 27 hours laboratory by arrangement per term
- Prerequisite: CULN-120 (may be taken concurrently) or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This course is an introduction to the skills required to participate in a variety of culinary competitions. Possible categories include hot and cold foods, buffet platters, desserts, decorated cakes, confectionery showpieces, and ice carvings. CSU

CULN-230B Culinary Competition II
.5 unit SC
- 27 hours laboratory by arrangement per term
- Prerequisite: CULN-230A or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This course is an advanced application of skills required to participate in a variety of culinary competitions. Possible categories include hot and cold foods, buffet platters, desserts, decorated cakes, confectionery showpieces, and ice carvings. CSU

CULN-235A Off-Campus Catering I
.5-1 unit SC
- Variable hours
- Prerequisite: CULN-105 and CULN-153 or equivalents
- Recommended: CULN-120 or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This course is an introduction to fundamental catering applications. Students will cater various types of off-campus events such as breakfast, lunch, and dinner buffets and plated events, and hors d'oeuvres. CSU

CULN-235B Off-Campus Catering II
.5-1 unit SC
- Variable hours
- Prerequisite: CULN-235A or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This intermediate off-campus catering course includes skill development in specific catering preset, setup, service and breakdown techniques. Students participate as group leaders at catering events. Students will cater various types of off-campus events such as breakfast, lunch, and dinner buffets and plated events, and hors d'oeuvres. CSU

CULN-240A On-Campus Catering I
.5-1 unit P/NP
- Variable hours
- Prerequisite: CULN-105 and CULN-153 or equivalents
- Recommended: CULN-120 or equivalent
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This course is an introduction to fundamental catering applications. Students will cater various types of on-campus events such as breakfast, lunch, and dinner buffets and plated events, coffee breaks, and hors d'oeuvres. CSU
CULN-240B On-Campus Catering II  
.5-1 unit  P/NP  
- Variable hours  
- Prerequisite: CULN-240A or equivalent  
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This intermediate on-campus catering course includes skill development in specific catering preset, setup, service and breakdown techniques. Students participate as group leaders at catering events. This course is an introduction to fundamental catering applications. Students will cater various types of on-campus events such as breakfast, lunch, and dinner buffets and plated events, coffee breaks, and hors d’oeuvres. CSU

CULN-240C On-Campus Catering III  
.5-1 unit  P/NP  
- Variable hours  
- Prerequisite: CULN-240B or equivalent  
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

This advanced on-campus catering course emphasizes skill development in effective client relations and event planning. Topics include comprehensive equipment requirements, setup plans, staff management, and service and breakdown techniques. CSU

CULN-281 Advanced Techniques of Baking and Pastry  
6.5 units  SC  
- 36 hours lecture/243 hours laboratory per term  
- Prerequisite: CULN-181 or equivalent  
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.  
- Formerly CULN-280 and CULN-150T

This course presents advanced theory and techniques in baking and pastry techniques. Students will practice advanced skills to produce a variety of commercial quality goods typical for hotels, restaurants, and retail bakeries. CSU

CULN-295 Occupational Work Experience Education in CULN  
1-4 units  SC  
- May be repeated three times  
- Variable hours  
- Note: In order to enroll in CULN-295, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

CULN-295 is supervised employment that extends classroom learning to the job site and relates to the student’s chosen field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Five hours work per week or seventy-five hours work per term is equal to one unit. Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

CULN-296 Internship in Occupational Work Experience Education in CULN  
1-4 units  SC  
- May be repeated three times  
- Variable hours  
- Note: In order to enroll in the CULN-296 course, students must be interning or volunteering, register for the course, complete an online Employment Form, and participate in an orientation. The Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

CULN-296 is a supervised internship in a skilled or professional level assignment in the student’s major field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU
CULN-298 Independent Study
.5-3 units SC
- Variable hours
- Note: Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the Culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting. Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

CULN-299 Student Instructional Assistant
.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor. Culinary and food service students must have a current record of satisfactory tuberculosis (TB) screening on file with the Culinary offices by the beginning of classes. Students are required to supply their own equipment and uniforms depending on the class. See instructor at the first class meeting.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

DANCE – DANCE

Christine Worsley, Dean
Kinesiology, Athletics and Dance Division
Kinesiology Office Building, Room 104

Possible career opportunities
Students who receive a degree in dance can not only pursue a career as a professional dancer in commercial dances onstage and in film, but they may also seek careers as dance therapists, dance instructors, or choreographers. Degree recipients can apply their knowledge of dance in areas such as arts administration, studio management, arts grant writing, and dance notators for dance companies.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts degree
Dance
Students completing the program will be able to...
A. demonstrate intermediate/advanced mastery of a variety of dance techniques utilizing proper alignment, axial and loco motor skills, and the ability to execute intermediate/advanced performance technique.
B. analyze the evolution of dance through the twentieth century, including the history of dance and other art forms.
C. demonstrate the ability to design a dance composition incorporating principles of technique, choreography, music, performance, staging, and aesthetic design.
D. describe the career and advanced educational opportunities available to them.
E. analyze the integration of various arts and ideas in selected technical, historical, and thematic contexts for the theater, music and dance performing arts.
F. demonstrate knowledge of the human body, its relationship between diet and health, and incorporate alternative movement classes to improve physical health to improve performance.

The associate in arts degree in dance is a comprehensive two-year course of study that exposes students to all aspects of the dance discipline. Students will be provided with a solid foundation in dance movement, performance and theory, as well as an opportunity to explore related types of performing arts such as drama and music. Students will improve the technical aspects of their dance technique, gain knowledge in compositional methodology, and perform in dance concerts.

Students may apply this knowledge to work in areas such commercial dance, choreography, dance therapy and dance instruction. Students wishing to pursue a career in the field of dance should consider this two-year program as it provides preparation for immediate entry into some of the areas listed above and provides a basic foundation for transfer to baccalaureate degrees necessary in other dance disciplines.

While most of the dance major requirements are transferable and many meet prerequisites required of dance majors, this degree is not designed as a transfer curriculum. Students may use any of the three general education patterns for this degree (DVC, IGETC, CSU GE). Students who wish to transfer to four-year institutions must consult with program faculty and college counselors to insure that the requirements for transfer to the four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or General Education 3 (CSU GE). General Education Option 1 (DVC GE) is appropriate for students who do not intend to transfer.

To earn an associate in arts degree with a major in dance, students must complete each course used to meet a major requirement with a “C” grade or higher and complete all general education requirements as listed in the catalog. Certain courses may satisfy both a major and general education requirements; however the units are only counted once.
complete at least 2 units from 2 different disciplines:  
DANCE-212  Ballet I .............................................. 1 
DANCE-222  Jazz Dance I ....................................... 1 
DANCE-232  Modern Dance I .................................... 1 

plus at least 2 units from 2 different disciplines:  
DANCE-213  Ballet II .............................................. 1 
DANCE-223  Jazz Dance II ....................................... 1 
DANCE-233  Modern Dance II .................................... 1 

DANCE-234  Modern Dance III ................................. 1 
KNDAN-105A  Pilates Mat Work I ............................. 0.5-2 
KNDAN-160A  Tap Dance I ........................................ 0.5-2 
KNDAN-162B  Tap Dance II ...................................... 0.5-2 
KNDAN-164A* Dance Production I ......................... 0.5-2 
KNDAN-164A* Balloon/Social Dance ............................................. 0.5-2 
KNDAN-164B* Swing Dance ................................... 0.5-2 
KNDAN-168A* Salsa and Latin Dance I .................. 0.5-2 
KNDAN-169A* Argentine Tango ............................. 0.5-2 
KNDAN-170A* Beginning Hip-Hop and Urban Funk ....... 0.5-2 
KNDAN-170B* Intermediate Hip-Hop and Urban Funk . . . 0.5-2 

at least one unit required 

plus at least 2 additional units from: any of the core technique courses not used above ....................... 2

**total core technique requirements** 8

**theory requirements**  
plus all units from:  
DANCE-201  Western Dance History: 20th Century to Present ........................................... 3 
DANCE-205  Music Theory for Dancers ........................................... 2 
DANCE-250  Dance Choreography ........................................... 2 

**performance requirements**  
plus at least 6 units from:  
DANCE-242  Repertory Dance Production I ..................... 1 
DANCE-243  Repertory Dance Production I - Tech Week .... 0.5 
DANCE-244  Repertory Dance Production II ...................... 1 
DANCE-246  Repertory Dance Production II - Tech Week .... 0.5 
DANCE-247  Dance Production I ........................................ 1.5 
DANCE-248  Dance Production I - Tech Week ..................... 0.5 
DANCE-249  Dance Production II ........................................ 1.5 
DANCE-256  Dance Production II - Tech Week ..................... 0.5 
DANCE-257  Dance Production Choreography - Tech Week .... 1.5 

**stagecraft requirements**  
plus at least 3 units from:  
DRAMA-111  Introduction to Lighting Design .................. 3 
DRAMA-112  Introduction to Stage Makeup .................... 3 
DRAMA-113  Introduction to Costume Design .................. 3 
DRAMA-122  Basic Principles of Acting .......................... 3 
DRAMA-200  Introduction to Technical Theater ................ 3 

**art/music/humanities requirements**  
plus at least 3 units from:  
DRAMA-139  Introduction to Theater ............................ 3 
DRAMA-142  Multicultural Perspectives in American Theater ........................................... 3 
ENGL-150  Introduction to Literature ............................ 3 
ENGL-162  Language, Literature and Culture ................... 3 
HUMAN-105  Introduction to Humanities: Arts and Ideas .... 3 
MUSIC-114  World Music ........................................... 3 

**total minimum required units** 27

**Limitations on enrollment**  
Effective fall term 2013, changes were made to regulations that govern community college enrollments placed limitations on the number of courses that students may take in certain disciplines within the Contra Costa Community College District. The charts below indicate which Diablo Valley College (DVC) courses are assigned to groups of courses (“families”) for which limitations have been imposed. Certain courses within certain “families” may be repeated (see catalog description), however, students are limited to four enrollments within the family. Certain DVC courses are equivalent to courses at Los Medanos College and Contra Costa College. An enrollment in an equivalent course at one of those colleges will count toward the allowable four enrollments within the family.

**NOTE:** Diablo Valley College may offer experimental or topics courses. When appropriate, based on content, such courses will be assigned to a “family” and that enrollment will be counted as an experience within the “family”.

**Family: Ballet**  
KNDAN-109A Ballet Fundamentals I 
KNDAN-110B Ballet Fundamentals II 
DANCE-212 Ballet I 
DANCE-213 Ballet II 
DANCE-214 Ballet III 
DANCE-216 Pointe Technique 

**Family: Jazz**  
KNDAN-120A Jazz Dance Fundamentals I 
KNDAN-120B Jazz Dance Fundamentals II 
DANCE-222 Jazz Dance I 
DANCE-223 Jazz Dance II 
DANCE-224 Jazz Dance III 

**Family: Modern**  
KNDAN-130A Modern Dance Fundamentals I 
KNDAN-130B Modern Dance Fundamentals II 
DANCE-232 Modern Dance I 
DANCE-233 Modern Dance II 
DANCE-234 Modern Dance III 

**Family: Ballroom Dance**  
KNDAN-150A Argentine Tango 
KNDAN-164A Balloon/Social Dance I 
KNDAN-166 Swing Dance 
KNDAN-168A Salsa and Latin Dance I 
KNDAN-168B Salsa and Latin Dance II 
KNDAN-169A Argentine Tango
Family: Tap
KNDAN-160A Tap Dance I
KNDAN-160B Tap Dance II

Family: Dance Production
DANCE-150A Dance Production II
DANCE-242 Repertory Dance Production I
DANCE-244 Repertory Dance Production II
DANCE-246 Dance Production I
DANCE-248 Dance Production II
DANCE-256 Dance Production Choreography

Family: Dance Performance
DANCE-150B Dance Production II - Tech Week
DANCE-243 Repertory Dance Production I – Tech Week
DANCE-245 Repertory Dance Production II – Tech Week
DANCE-247 Dance Production I - Tech Week
DANCE-249 Dance Production II - Tech Week
DANCE-257 Dance Production Choreography - Tech Week

Family: Dance Survey
KNDAN-100 Introduction to Dance
KNDAN-162 Broadway Dance

Family: Urban Dance
KNDAN-150B Beginning Hip-Hop and Urban Funk
KNDAN-150C Intermediate Hip-Hop and Urban Funk
KNDAN-170A Hip-Hop and Urban Funk Dance I
KNDAN-170B Hip-Hop and Urban Funk Dance II

DANCE-150 Topics in Dance
3-4 units SC
- Variable hours
A supplemental course in Dance to provide a study of current concepts and problems in dance. Specific topics will be announced in the schedule of classes. CSU

DANCE-201 Western Culture Dance History: 20th Century to Present
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course presents the role of dance in Western culture from the beginning of the 20th century through the present day. Historic styles and movements of dance including the Diaghilev period of Ballet and the development of modern dance are discussed, including their influence on present-day ballet, modern, and contemporary dance practice. CSU, UC

DANCE-205 Music Theory for Dancers
2 units SC
- 18 hours lecture/54 hours laboratory per term
This is an introductory course in music and its relationship to dance and dancers. Compositional elements of music and their application to choreography and dance performance will be practiced. CSU, UC

DANCE-212 Ballet I
1 unit SC
- 54 hours laboratory per term
- Recommended: KNDAN-110A or equivalent
This is an intermediate course in ballet dance. The focus is on intermediate ballet barre, center adagio, allegro work, and across the floor combinations. The history of classical ballet works and their influence on the ballet dancer and current ballet styles will also be covered. CSU, UC

DANCE-213 Ballet II
1 unit SC
- 54 hours laboratory per term
- Prerequisite: DANCE-212 or equivalent
This is an advanced course in ballet dance. The focus is on advanced ballet barre, center adagio, allegro work, and across-the-floor combinations. Basic choreographic principles as they relate to ballet will also be presented. CSU, UC

DANCE-214 Ballet III
1 unit SC
- 54 hours laboratory per term
- Prerequisite: DANCE-213 or equivalent
This is an advanced/pre-professional course in ballet dance. The focus is on advanced ballet barre, center adagio, allegro work, and across-the-floor combinations at the pre-professional level. Classical ballet variations and basic pas de deux techniques as they relate to classical ballet will be practiced. CSU, UC

DANCE-216 Pointe Technique
1 unit SC
- 54 hours laboratory per term
- Prerequisite: DANCE-212 or KNDAN-110A or equivalent
This is a course in classical ballet training through the application of pointe technique. The class will focus on line, musicality, sequences, strength and grace as they relate to pointe technique. The historical origins of the pointe shoe, pointe work, conceptual principles of pointe ballet as an art form, and the anatomical structure of the lower extremities will also be presented. CSU, UC
DANCE-222 Jazz Dance I
1 unit SC
• 54 hours laboratory per term
• Recommended: KNDAN-120 or equivalent
This is an intermediate course in jazz dance. The focus is on contemporary, lyrical, hip-hop and Broadway styles. The history of jazz dance on stage, movie, and videos and its influence on the jazz dancer and current jazz dance styles will also be covered. CSU, UC

DANCE-223 Jazz Dance II
1 unit SC
• 54 hours laboratory per term
• Prerequisite: DANCE-222 or equivalent
This is an advanced course in jazz dance. The focus is on advanced jazz dance technique from contemporary, lyrical, hip-hop and Broadway styles. Choreographic principles as they relate to jazz dance will also be covered. CSU, UC

DANCE-224 Jazz Dance III
1 unit SC
• 54 hours laboratory per term
• Prerequisite: DANCE-223 or equivalent
This is an advanced/pre-professional course in jazz dance. The focus is on advanced jazz dance technique from contemporary, lyrical, hip-hop and Broadway styles utilizing pre-professional dance performance skills. Choreographic principles as they relate to jazz dance to enhance performance potential will also be covered. CSU, UC

DANCE-232 Modern Dance I
1 unit SC
• 54 hours laboratory per term
• Recommended: KNDAN-130 or equivalent
This is an intermediate course in modern dance. The focus is on intermediate axial and locomotor movements, styles from early modern, post-modern, and contemporary modern innovators. The history of modern dance and its influence on the modern dancer and current modern dance styles will also be covered. CSU, UC

DANCE-233 Modern Dance II
1 unit SC
• 54 hours laboratory per term
• Prerequisite: DANCE-232 or equivalent
This is an advanced course in modern dance. The focus is on advanced axial and locomotor movements and styles from early modern, post-modern, and contemporary modern innovators. Choreographic principles related to modern dance will also be covered. CSU, UC

DANCE-234 Modern Dance III
1 unit SC
• 54 hours laboratory per term
• Prerequisite: DANCE-233 or equivalent
This is an advanced/pre-professional course in modern dance. The focus is on advanced performance level axial and locomotor movements and styles from early modern, post-modern, and contemporary modern innovators with an emphasis on pre-professional performance quality. Choreographic principles related to modern dance that enhance performance potential will also be covered. CSU, UC

DANCE-242 Repertory Dance Production I
1 unit SC
• 54 hours laboratory by arrangement per term
• Co-requisite: DANCE-243 or equivalent
This course prepares students for a dance performance. The emphasis is on the mastery of faculty-choreographed compositions to be presented to a live audience in a professional theater space. CSU, UC

DANCE-243 Repertory Dance Production I - Tech Week
.5 unit SC
• 36 hours laboratory by arrangement per term
• Co-requisite: DANCE-242 or equivalent
Students will participate in a dance performance of faculty-choreographed compositions for a live audience in a professional theater space. CSU, UC

DANCE-244 Repertory Dance Production II
1 unit SC
• 54 hours laboratory by arrangement per term
• Prerequisite: DANCE-242 or equivalent
• Co-requisite: DANCE-245 or equivalent
This course prepares the experienced dancer for a dance performance. The emphasis is on the mastery of intermediate level faculty-choreographed compositions to be presented to a live audience in a professional theater space. CSU, UC

DANCE-245 Repertory Dance Production II - Tech Week
.5 unit SC
• 36 hours laboratory by arrangement per term
• Co-requisite: DANCE-244 or equivalent
This is a dance performance course for the experienced dance student. Students will participate in a dance performance of faculty-choreographed compositions for a live audience in a professional theater space. CSU, UC
DANCE-246 Dance Production I  
1.5 units  SC  
- 72 hours laboratory per term  
- Co-requisite: DANCE-247 or equivalent

This course prepares students for a dance performance. The emphasis is on the mastery of student-choreographed compositions to be presented to a live audience in a professional theater space. Students will also participate in the technical and business aspects of the production. CSU, UC

DANCE-247 Dance Production I - Tech Week  
.5 unit  SC  
- 36 hours laboratory by arrangement per term  
- Co-requisite: DANCE-246 or equivalent

Students will participate in a dance performance of student-choreographed compositions for a live audience in a professional theater space. CSU, UC

DANCE-248 Dance Production II  
1.5 units  SC  
- 72 hours laboratory per term  
- Prerequisite: DANCE-246 or equivalent  
- Co-requisite: DANCE-249 or equivalent

This course prepares the experienced dance student for a dance performance. The emphasis is on the mastery of student-choreographed compositions to be presented to a live audience in a professional theater space. Students will also participate in the technical and business aspects of the production. CSU, UC

DANCE-249 Dance Production II - Tech Week  
.5 unit  SC  
- 36 hours laboratory by arrangement per term  
- Co-requisite: DANCE-248 or equivalent

This is a dance performance course focusing on the role of the choreographer in the presentation of an original dance composition presented to a live audience in a professional theater space. The emphasis is on staging techniques, incorporation of technical theater elements, and performance development. A final dance concert performance of the student's original choreography culminates the term's work. CSU, UC

DANCE-250 Dance Choreography  
2 units  SC  
- 18 hours lecture/54 hours laboratory per term  
- Formerly DANCE-240

This course provides an introduction to principles of choreography. Dance movement phrasing, spatial design and relationships, rhythm, theme and development, concert, solo and group work will be presented. Critical evaluation of choreographic dance components through analysis and presentation in the classroom will also be discussed. CSU, UC

DANCE-256 Dance Production Choreography  
1.5 units  SC  
- 72 hours laboratory per term  
- Prerequisite: DANCE-246 and DANCE-250 or equivalents  
- Co-requisite: DANCE-257 or equivalent

This is a dance production class with an emphasis on experiential learning by choreographing, staging and rehearsing a student-choreographed dance production. It includes the application of choreographic theory and technique with emphasis on dance as a performing art and participation in the technical and business aspects of a student production. CSU, UC

DANCE-257 Dance Production Choreography - Tech Week  
.5 unit  SC  
- 36 hours laboratory by arrangement per term  
- Co-requisite: DANCE-256 or equivalent

This is a dance performance course focusing on the role of the choreographer in the presentation of an original dance composition presented to a live audience in a professional theater space. The emphasis is on staging techniques, incorporation of technical theater elements, and performance development. A final dance concert performance of the student's original choreography culminates the term's work. CSU, UC

DANCE-299 Student Instructional Assistant  
.5-3 units  SC  
- Variable hours  
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
DENTAL ASSISTING – DENTL

Tish Young, Dean
Biological and Health Sciences Division
Physical Sciences Building, Room 263

Possible career opportunities
The dental assisting program provides an excellent path for those interested in a variety of professions in the dental field. The Diablo Valley College dental assisting program prepares students to work in a dental office as an essential member of the dental team. Employment opportunities for the graduates include, but are not limited to: chairside assistant or front office administrator for dental offices or clinics, x-ray technician for dental radiation laboratories, agent for dental insurance companies, laboratory technician for dental laboratories, product representative for dental product manufacturers or marketing agent for dental supply companies. The DVC dental assisting program is approved by the Dental Board of California and accredited by the Commission on Dental Accreditation of the American Dental Association and the United States Department of Education. This qualifies the student upon graduation to take state and national board examinations to become a licensed Registered Dental Assistant in California (RDA) and a Certified Dental Assistant (CDA). Other options for continuing education and licensing allow Registered Dental Assistant to specialize and become a Registered Dental Assistant in Extended Functions (RDAEF). Other career options include study to become a Registered Dental Hygienist (RDH) or a dentist (DDS or DMD).

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC-website at www.dvc.edu/slo.

Associate in science degree
Dental assisting

Students completing the program will be able to...
A. students completing this program will be able to act as a member of the dental health team and apply professional, ethical and legal principles while functioning in the role of the Registered Dental Assistant (RDA).
B. students completing this program will be able to assume responsibility for prevention of disease transmission utilizing universal precautions in the work environment to protect those entrusted to their care.
C. students completing this program will be able to show competence in skills as described in the current California Dental Practice Act. Said professional should perform with a balance of professionalism and sensitivity characteristic of genuine compassionate care.
D. students completing this program will be able to exhibit knowledge necessary for successful completion of the California Registered Dental Assistant’s Examination and the National Certified Dental Assistant’s Examination.
E. students completing this program will be able to apply critical thinking and self-assessment skills to enhance learning, research, patient care, professional growth, and continued competency.
F. students completing this program will be able to integrate and apply health literacy and culturally competent communication skills to oral health care services, academic endeavors, community projects, and professional activities.

The required dental assisting program classes are taught during the day; however, the general education courses required for the certificate or degree may be taken in the evening or at an alternate location. Students completing the degree or certificate program in dental assisting are eligible to take the California State written and practical examination and obtain their Registered Dental Assisting (RDA) license and take their national Certified Dental Assistant examination to become a Certified Dental Assistant (CDA).

The 18-month program is scheduled to begin each fall term in August and the dental assisting courses will be completed by the middle of May. The two terms include classroom instruction as well as clinical experience in the DVC dental clinic, local dental schools, and various dental offices. In addition to the dental assisting classes the program requires nine units of general education that must be completed prior to graduating from the program and applying to take the state license and national examinations.

Entrance into the Diablo Valley College (DVC) Dental Assisting Program is highly competitive with enrollment limited to 24 students. To be eligible for enrollment, applicants must have a high school diploma or its equivalent and enroll in DENTL-120 Orientation to the Dental Assisting Program, which is offered prior to enrollment for the fall term. Prior to August 1, students who have successfully passed DENTL-120 and have been chosen to enroll in the program will be required to show: (1) proof of CPR (AHA/Health Care Provider/American Red Cross/Professional Rescuer) certification; (2) required immunizations/titers; (3) proof of negative two-step TB test; (4) results of a recent physical examination/screening; (5) results of a certified background check; and (6) results of a certified drug test. Reporting documents will be handed out during the orientation meeting.

Associate degree requirements generally can be completed in two years of full-time study. Some courses may meet lower division requirements for a baccalaureate degree at selected campuses of CSU or the bachelor of arts degree in health administration at private universities.

To earn an associate in science degree with a major in dental assisting, students must complete each course used to meet a major requirement with a “C” grade or higher and complete all general education requirements as listed in the catalog. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.
Dental assisting

For dental assisting program information contact the Coordinator of Dental Programs, Counseling Office, or DVC website.

(program prerequisite: units
DENTL-120 Orientation to the Dental Assisting Program ................. 0.3

Note: It is strongly recommended to complete the required general education courses* prior to entering the dental assisting program in the fall term.

major requirements: units
COMM-121* Persuasion and Critical Thinking ....................... 3
DENHY-124 Dental Radiography .................................. 3
DENHY-290 Transitioning from Student to Dental Professional .............................................. 1
DENTL-171 Oral Facial Anatomy and Body Systems ........... 3.5
DENTL-173 Dental Operative Procedures I ................. 3
DENTL-174 Dental Materials and Laboratory Procedures .......................................................... 3
DENTL-175 Infection Control and Theories of Dental Assisting .............................................. 3
DENTL-180 Dental Office Management ............................... 3
DENTL-181 Dental Emergencies, Pharmacology and Oral Pathology ........................................... 2
DENTL-182 Dental Radiography Laboratory ......................... 0.5
DENTL-183 Dental Operative Procedures II ...................... 5
DENTL-184 Clinical Experience ....................................... 7
ENGL-122* Freshman English: Composition and Reading .......................................................... 3

plus at least 3 units from:

PSYCH-101* Introduction to Psychology ....................... 3
PSYCH-122* Psychology in Modern Life ........................ 3

(total minimum required units ........................................... 43.3

Note: DVC GE Areas IC, II and III must be satisfied to complete AS degree requirements.

Certificate of achievement

Dental assisting

Students completing the program will be able to...

A. students completing this program will be able to act as a member of the dental health team and apply professional, ethical and legal principles while functioning in the role of the Registered Dental Assistant (RDA).

B. students completing this program will be able to assume responsibility for prevention of disease transmission utilizing universal precautions in the work environment to protect those entrusted to their care.

C. students completing this program will be able to show competence in skills as described in the current California Dental Practice Act. Said professional should perform with a balance of professionalism and sensitivity characteristic of genuine compassionate care.

D. students completing this program will be able to exhibit knowledge necessary for successful completion of the California Registered Dental Assistant’s Examination and the National Certified Dental Assistant’s Examination.

E. students completing this program will be able to apply critical thinking and self-assessment skills to enhance learning, research, patient care, professional growth, and continued competency.

F. students completing this program will be able to integrate and apply health literacy and culturally competent communication skills to oral health care services, academic endeavors, community projects, and professional activities.

(program prerequisite: units
DENTL-120 Orientation to the Dental Assisting Program ......................................................... 0.3

Note: It is strongly recommended to complete the required general education courses* prior to entering the dental assisting program in the fall term.

required courses: units
DENHY-124 Dental Radiography .................................. 3
DENHY-290 Transitioning from Student to Dental Professional ................................................... 1
DENTL-171 Oral Facial Anatomy and Body Systems ........... 3.5
DENTL-173 Dental Operative Procedures I ...................... 3
DENTL-174 Dental Materials and Laboratory Procedures .......................................................... 3
DENTL-175 Infection Control and Theories of Dental Assisting .............................................. 3
DENTL-180 Dental Office Management ............................... 3
DENTL-181 Dental Emergencies, Pharmacology and Oral Pathology ........................................... 2
DENTL-182 Dental Radiography Laboratory ......................... 0.5
DENTL-183 Dental Operative Procedures II ...................... 5
DENTL-184 Clinical Experience ....................................... 7

plus at least 3 units from:

ENGL-118* College Writing Development ....................... 3
ENGL-122* Freshman English: Composition and Reading .......................................................... 3

plus at least 3 units from:

COMM-120* Public Speaking ....................................... 3
COMM-121* Persuasion and Critical Thinking ................... 3
COMM-128* Interpersonal Communication ....................... 3

(total minimum required units ........................................... 43.3

DENTL-110 Overview of the Dental Professions

1.5 units P/NP
• 27 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: This course is open to all students
This course provides an overview of the dental professions, with special emphasis on assisting, hygiene and dental technology concepts. Content is designed to be helpful to students considering applying to dental assisting, dental hygiene, or dental technology programs. CSU
DENTL-120  Orientation to the Dental Assisting Program
.3 unit  P/NP

- 6 hours lecture/3 hours laboratory per term
- Limitation on enrollment: Only students who submit a dental assisting application with evidence of a high school diploma or its equivalent will be allowed to register for this course. See the catalog or website for program information. Students who complete this course with a (P) grade (75%) will be eligible for selection for admission into the dental assisting program.
- Note: Students must submit an official high school diploma or equivalent if they are selected to be a part of the program starting in August.

This course is designed for all students interested in enrolling into the dental assisting program. The orientation course will provide the student with detailed enrollment information and the health protocol standards for dental assisting students. Emphasis will be placed on laboratory asepsis, infection control and disease transmission. Career pathways of dental assisting, registered dental assisting, professionalism, malpractice insurance and dental assisting organizations will be discussed. Guidelines from the Dental Practice Act rules and regulations will be presented in relationship to the dental assistant, registered dental assistant, and the registered dental assistant in extended functions. An overview of dental terminology, introduction to clinical instrumentation skills and areas of planning and time management for the dental assisting student. CSU

DENTL-150  Topics in Dental Assisting
.3-4 units  SC

- Variable hours

A supplemental course in dental assisting to provide a study of current concepts and methods in dental assisting and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

DENTL-171  Oral Facial Anatomy and Body Systems
3.5 units  LR

- 54 hours lecture/36 hours laboratory per term
- Prerequisite: DENTL-120 or equivalent
- Limitation on enrollment: Acceptance to the DVC Dental Assisting program, including current TB Clearance, hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certificate (Basic Life Support for Healthcare Provider with AED).
- Recommended: Eligibility for ENGL-122 or equivalent

This course introduces students to head and neck anatomy, general anatomy and body systems. Emphasis will be on the teeth, their supporting structures, and the respiratory and cardiovascular systems as they relate to monitoring patient sedation. CSU

DENTL-173  Dental Operative Procedures I
3 units  LR

- 36 hours lecture/54 hours laboratory per term
- Prerequisite: DENTL-120 or equivalent
- Limitation on enrollment: Acceptance to the DVC Dental Assisting program, including current TB clearance, hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certificate (Basic Life Support for Healthcare Provider with AED).
- Recommended: Eligibility for ENGL-122 or equivalent

Students will be introduced to the principles of chairside assisting. Emphasis is to be placed on operative procedures, which include chairside responsibilities, instrument identification, tray setups, four-handed techniques, and sequences of general dentistry procedures. Identification, care and maintenance of the operatory and equipment will also be presented. CSU

DENTL-174  Dental Materials and Laboratory Procedures
3 units  LR

- 36 hours lecture/54 hours laboratory per term
- Prerequisite: DENTL-120 or equivalent
- Limitation on enrollment: Acceptance to the DVC Dental Assisting program, including current TB clearance, hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certificate (Basic Life Support for Healthcare Provider with AED).
- Recommended: Eligibility for ENGL-122 or equivalent

This course introduces students to the study, characteristics, safe manipulation, and use of dental materials, laboratory equipment and instruments in operative and restorative dentistry. Emphasis is placed on infection control, safety standards, and hazard control protocols. CSU

DENTL-175  Infection Control and Theories of Dental Assisting
3 units  LR

- 36 hours lecture/54 hours laboratory per term
- Prerequisite: DENTL-120 or equivalent
- Limitation on enrollment: Acceptance into the DVC Dental Assisting program, including current TB clearance, hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certificate (Basic Life Support for Healthcare Provider with AED).
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: This course meets the eligibility requirements for the certificate in Infection Control and the California Dental Practice Act required by the state for unlicensed Dental Assistants.

This course introduces the student to microbiology, infectious diseases, immunity and infection control in the dental office. Topics include documenting medical/dental health histories; taking and recording vital signs; microbiology of dental decay and application of its relationship to the principles of oral hygiene; dental health related diet and nutrition; oral inspection, documentation, and dental charting; orientation to the roles, functions and duties of the members of the dental team. CSU
Dental assisting

DENTL-180 Dental Office Management
3 units LR
- 54 hours lecture per term
- Prerequisite: DENTL-171 or equivalent
- Limitation on enrollment: Acceptance to the DVC Dental Assisting program, including current TB clearance, hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certificate (Basic Life Support for Healthcare Provider with AED).
- Recommended: Eligibility for ENGL-122 or equivalent

This course covers front office management duties in the dental profession. These duties include dental staff management and interaction, patient management, written communication, telecommunication, bookkeeping/financial transactions, dental office documents, dental insurance, appointment management systems, dental software, recall systems, inventory systems, and supply ordering. Dental jurisprudence, related ethical concerns, and HIPAA compliance are presented in this course. CSU

DENTL-181 Dental Emergencies, Pharmacology and Oral Pathology
2 units LR
- 36 hours lecture per term
- Co-requisite: DENTL-175 or equivalent
- Limitation on enrollment: Acceptance to the DVC Dental Assisting program, including current TB clearance, hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certificate (Basic Life Support for Healthcare Provider with AED).
- Recommended: Eligibility for ENGL-122 or equivalent

This course prepares students to assist in the management of medical and dental emergencies, including review of legal and ethical responsibilities. Pathology of the hard and soft tissues of the oral cavity and function of pharmacology are also covered. CSU

DENTL-182 Dental Radiography Laboratory .5 unit LR
- 27 hours laboratory per term
- Prerequisite: DENTHY-124 or equivalent
- Limitation on enrollment: Acceptance to the DVC Dental Assisting program, including current TB clearance, hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certificate (Basic Life Support for Healthcare Provider with AED).
- Recommended: Eligibility for ENGL-122 or equivalent

This course emphasizes patient management, radiation safety and infection control procedures in accordance with Occupational and Safety and Health Administration (OSHA) and Center For Disease Control (CDC) guidelines and regulations from the California Dental Practice Act (DPA). The laboratory and clinical experiences will allow students to enhance the efficiency and quality of their radiographic techniques. Students will perform, evaluate, and interpret various types of intra-oral and extra-oral radiographs using advanced principles and practices of dental radiography with emphasis on technique and diagnostic quality of dental x-rays. CSU

DENTL-183 Dental Operative Procedures II
5 units LR
- 54 hours lecture/108 hours laboratory per term
- Prerequisite: DENTL-173 or equivalent
- Limitation on enrollment: Acceptance to the DVC Dental Assisting program, including current TB clearance, hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certificate (Basic Life Support for Healthcare Provider with AED).
- Recommended: Eligibility for ENGL-122 or equivalent

This course presents instruction in assisting and instrumentation for the following dental specialties: orthodontics, endodontics, periodontics, pediatric dentistry, prosthodontics, oral maxillofacial surgery, and public health. The theory and practice of coronal polishing and dental sealants are included. Completion of a dental health community service project is required. CSU

DENTL-184 Clinical Experience
4 units LR
- 27 hours lecture/300 hours laboratory per term
- Prerequisite: DENTL-174 or equivalent
- Limitation on enrollment: Acceptance to the DVC Dental Assisting program, including current TB Clearance, hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certificate (Basic Life Support for Healthcare Provider with AED).
- Recommended: Eligibility for ENGL-122 or equivalent

This course offers students supervised clinical experience in an externship environment. Students will provide chairside dental assisting in general practice, specialty clinics, and dental schools. CSU

DENTL-299 Student Instructional Assistant .5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
Dental hygiene

Tish Young, Dean
Biological and Health Sciences Division
Physical Sciences Building, Room 263

Possible career opportunities
The Diablo Valley College (DVC) dental hygiene program prepares students to work as an essential member of the dental team. The dental hygiene program provides an excellent path for those interested in a variety of positions in the dental field. Working in a private dental office continues to be the primary place of employment for dental hygienists. For today’s dental hygiene professional, there are many other career pathways to explore including providing dental hygiene services for patients in hospitals, nursing homes, and public health clinics.

With additional education, dental hygienists can choose to pursue a teaching career in dental education programs, a career in research, public advocacy, or as a sales representative for an oral healthcare company.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Dental hygiene

Students completing the program will be able to...

A. synthesize knowledge from all branches of learning to provide preventive, educational, collaborative, and therapeutic dental hygiene care for individuals and groups in a variety of settings.
B. develop a desire and ability to provide dental hygiene care applying the highest possible ethical and legal principles including those outlined by the American Dental Hygienists’ Association and the American Dental Association.
C. function in the professional dental hygiene roles of the clinician, health promoter/educator and change agent.
D. develop and maintain professional competence evidenced in evidence-based decision-making, and continued education while promoting personal and professional growth.
E. promote client and community satisfaction with the quality of the dental hygiene education and care process provided by the program.

This is a two-year program of classroom instruction and clinical experience which prepares students to perform the educational, clinical, and laboratory responsibilities of a dental hygienist. The DVC dental hygiene program is accredited by the American Dental Association Commission on Dental Accreditation (CODA) and by the United States Department of Education and has also been approved by the Dental Hygiene Committee of California (DHCC). Skills include direct patient care, patient assessment, dental hygiene care planning, scaling, root planning, radiographs, preventative measures, sealants, local anesthetic administration, nitrous oxide sedation, and customized oral health education for individuals and groups. The program prepares students to take written and clinical licensing exams. The Dental Hygiene curriculum requires two consecutive academic years including summer. Entrance into the DVC Dental Hygiene program is highly competitive with enrollment limited to 20 students.

To be eligible for enrollment into the dental hygiene program, applicants must complete the specified prerequisite courses prior to submitting an application. All science prerequisite courses must be taken within the last seven years and the applicant must have an overall GPA of 3.0 or higher in these courses. Applications for acceptance to the dental hygiene program are generally accepted in January through mid-February for entrance during the following summer term.

Once accepted into the program students must successfully complete the orientation course DENHY-101 and by August 1st must show: (1) proof of CPR (AHA/Health Care Provider/American Red Cross/Professional Rescuer) certification; (2) required immunizations/titers; (3) proof of negative two-step TB test; (4) results of a recent physical examination/screening; (5) results of a certified background check; and (6) results of a certified drug test. Reporting documents will be handed out during the orientation meeting.

Students who successfully complete the program earn an A.S. degree in Dental Hygiene. A.S. degree requirements include prerequisite courses, general education courses, and the required Dental Hygiene program requirements listed below. Students must achieve a “C” grade or higher in each of the degree conferring courses. Dental hygiene required courses are only available during the day. However, required general education courses are available in the day or evening. It is highly recommended that students complete the required general education course prior to beginning the program. For Dental Hygiene program information and an application packet, contact the Coordinator of Dental Programs, the Counseling office or the DVC website.

Major requirements:

<table>
<thead>
<tr>
<th>Program prerequisites or equivalents</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOSC-139* Human Anatomy................</td>
<td>5</td>
</tr>
<tr>
<td>BIOSC-140* Human Physiology .............</td>
<td>5</td>
</tr>
<tr>
<td>CHEM-108* Introductory Chemistry......</td>
<td>4</td>
</tr>
<tr>
<td>CHEM-109* Introduction to Organic and Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>ENGL-122 Freshman English: Composition and Reading</td>
<td>3</td>
</tr>
<tr>
<td>NUTRI-160* Nutrition: Science and Applications</td>
<td>3</td>
</tr>
</tbody>
</table>
Dental hygiene

plus at least 4 units from:
BIOSC-119* Fundamentals of Microbiology 4
BIOSC-146* Principles of Microbiology 5

*These courses must have been completed within the past seven years. An overall GPA of 3.0 or higher in these courses is required for program admission.

The following courses are open only to those accepted into the dental hygiene program.

DENHY-101 Dental Hygiene Orientation
.5 unit P/NP
- 6 hours lecture/12 hours laboratory per term
- Limitation on enrollment: Provisional acceptance into the Diablo Valley College Dental Hygiene program (or as an alternate) is required for registration in this course.
- Note: Refer to the DVC catalog or Dental Hygiene Program website for information concerning program prerequisites and application process.

This course is designed to provide an overview of dental hygiene curriculum. Time and financial commitments necessary to be successful in the dental hygiene program will be emphasized. CSU

DENHY-120 Introduction to Dental Hygiene: Theory, Process of Care and Practice
1 unit LR 18 hours lecture per term
- Prerequisite: DENHY-101 or equivalent
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program includes current TB clearance, hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certificate (basic life support for healthcare provider with automated external defibrillators [AED])

This course provides an introduction to the evolving profession of dental hygiene and focuses on the conceptual framework for dental hygiene and the process of care for the promotion of oral health and wellness. Topics include the history of the dental hygiene profession, institutional accreditation and individual licensing, current dental health trends, health promotion strategies and electronic portfolio development. CSU

DENHY-121 Introduction to Comprehensive Clinical Dental Hygiene Care
5 units LR 54 hours lecture/108 hours laboratory per term
- Prerequisite: DENHY-101 or equivalent
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, Tetanus vaccination, malpractice insurance, and current CPR certificate (Basic Life Support for Healthcare Provider with Automated External Defibrillator [AED]). Certified background check and negative drug test required as a condition of enrollment in this course.

This course provides an introduction to the application of the dental hygiene process of care guided by the human needs conceptual model. The course includes clinical experiences focusing on assessment procedures related to comprehensive dental hygiene care. Instrumentation skill development with an emphasis on safety for the client as well as the clinician will also be addressed. CSU
DENHY-122 Clinical Dental Hygiene
5 units LR
- 45 hours lecture/144 hours laboratory per term
- Prerequisite: DENHY-121 or equivalent
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course provides an introduction to clinical dental hygiene practice. Instruction and experiences will emphasize client assessments, dental hygiene diagnosis, treatment planning implementation, and evaluation of dental hygiene care. Application of knowledge, critical thinking, and basic clinical skills acquired in previous dental hygiene courses will be emphasized. CSU

DENHY-123 Oral Health Care Education
2 units LR
- 36 hours lecture per term
- Prerequisite: DENHY-101 and NUTRI-160 or equivalents
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course provides an introduction to the principles, theory, and practice of oral hygiene care. The focus is to develop educational techniques and technical skills that can be used to assist individuals and groups in becoming integrally involved in their dental/oral care. CSU

DENHY-124 Dental Radiography
3 units LR
- 36 hours lecture/54 hours laboratory per term
- Prerequisite: DENHY-101 or DENTL-190 or equivalent
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Assisting or Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course examines the fundamentals of dental radiography. Topics include history, principles, legal considerations, and radiation safety. Clinical applications include exposure techniques, film processing, mounting and interpreting dental radiographs and identifying errors in technique and their methods of correction. CSU

DENHY-125 Head and Neck Anatomy, Histology, and Embryology
4 units LR
- 54 hours lecture/DENHY-101, BIOSC-139 and BIOSC-140 or equivalents
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course provides an introduction to the structure and functions of the head and neck with special attention given to the oral cavity. General micro-anatomy of the tissue and the embryological development of the head and neck are covered. CSU

DENHY-126 Dental Morphology
2 units LR
- 36 hours lecture per term
- Prerequisite: DENHY-101 or equivalent
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course provides an introduction to the structures and forms of the human dentition. Aspects related to dental hygiene care such as root morphology, restorative charting, occlusion and dental anomalies are emphasized. CSU

DENHY-127 Infection Control: Theory, Practice and Communication
2 units LR
- 36 hours lecture per term
- Prerequisite: DENHY-101 and BIOSC-119 or BIOSC-146 or equivalents
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course provides an overview of the prevention of disease and disease transmission in the dental environment. This course will include infection control principles, protocols, Center For Disease Control (CDC) and Occupational Safety and Health Administration (OSHA) recommendations/regulations, and an introduction to effective communication techniques as related to infection control and dental hygiene care delivery. CSU
DENHY-128  Periodontics for the Dental Hygienist  
2 units  LR  
- 36 hours lecture per term  
- Prerequisite: DENHY-101 or equivalent  
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course presents a structured study of the discipline of periodontics with a focus on the biological, behavioral and clinical aspects of the periodontal diseases. Topics include normal vs. diseased periodontal structures, etiology, risk factors, classification, and epidemiology. Students will apply periodontal assessment techniques leading to the development of appropriate strategies for planning preventative care, initial treatment and maintenance procedures for the periodontal diseases. Students are introduced to evidence-based decision making as they apply course content to simulated cases. CSU

DENHY-129  Contemporary Dental Materials for the Dental Hygienist  
1.5 units  LR  
- 18 hours lecture/36 hours laboratory per term  
- Prerequisite: DENHY-101 or equivalent  
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course presents the fundamentals of dental materials. Basic science, behavior and manipulation of dental materials in a framework that enables adaptation to the rapidly evolving array of new dental materials and techniques in the professional arena will be covered. CSU

DENHY-131  Expanded Functions for the Dental Hygienist  
2 units  LR  
- 18 hours lecture/54 hours laboratory per term  
- Prerequisite: DENHY-127 or equivalent; CHEM-108 and CHEM-109 or equivalent  
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course presents dental hygiene advanced clinical functions including clinical practice in administration of local anesthetics, topical anesthetic agents, nitrous oxide/oxygen analgesia and soft tissue curettage. CSU

DENHY-133  Behavioral Foundations and Communications Skills  
1 unit  LR  
- 18 hours lecture per term  
- Prerequisite: DENHY-101 or equivalent

This course introduces students to principles drawn from the behavioral sciences to guide dental hygienist-client communication. The basic components of the communication process, verbal and nonverbal communication, therapeutic and non-therapeutic communication techniques, listening skills, major theories of motivation, and the interrelationship between teaching, learning, and communication will be covered. Focus is on the modification of teaching, learning, and communication techniques appropriate for clients throughout the life span and development of abilities to interact with all members of our multicultural society. CSU

DENHY-134  Evaluation of Scientific Research  
2 units  LR  
- 36 hours lecture per term  
- Prerequisite: DENHY-120 and ENGL-122 or equivalents  
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course is designed to familiarize the student with scientific research methodology and skills to critically review, evaluate and interpret scientific research and professional literature. CSU

DENHY-135  Pharmacology for the Dental Hygienist  
3 units  LR  
- 54 hours lecture per term  
- Prerequisite: DENHY-101 or equivalent  
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course introduces the discipline of pharmacology. The focus is on categorizing drugs by therapeutic use and understanding the physiologic basis for drug action and interaction. Client case scenarios are introduced to allow students to apply course content to simulated clinical situations. CSU
DENHY-136  Dental Hygiene Care for Clients with Special Needs
1 unit  LR
- 18 hours lecture per term
- Prerequisite: DENHY-101 or equivalent
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course focuses on goals, principles, and treatment modification of comprehensive dental hygiene care for clients with special needs. CSU

DENHY-150  Topics in Dental Hygiene .3-4 units  LR
- Variable hours
- Prerequisite: DENHY-101 or equivalent
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course is a supplemental class in dental hygiene to provide a study of current concepts and problems in dental hygiene and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

DENHY-219  Pathology 2 units  LR
- 36 hours lecture per term
- Prerequisite: DENHY-120 or equivalent
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course provides an introduction to the principles of general and oral pathology. The focus is to gain skill in recognizing pathologic conditions and to develop an understanding of disease mechanisms, the diagnostic process, referral, and treatment options. CSU

DENHY-223  Ethics, Jurisprudence, and Practice Management 2 units  LR
- 36 hours lecture per term
- Prerequisite: DENHY-120 or equivalent
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course examines jurisprudence, ethics, and practice management as those concepts relate to dental hygiene care and the dental profession. The importance of professional conduct, continuous quality improvement, self-assessment and peer evaluation are emphasized. Management and leadership skills essential for dental hygienists to participate in the practice management and administration of a dental hygiene practice will be covered. CSU

DENHY-225  Community Oral Health 1 unit  LR
- 18 hours lecture per term
- Prerequisite: DENHY-120 or equivalent

This course is designed to focus on oral health promotion and disease prevention for a variety of populations with diverse oral health needs. It provides students with an introduction to the dental care delivery system and the significant social, political, cultural and economic forces directing the system. CSU

DENHY-226  Community Oral Health Service Learning 1.5 unit  LR
- 18 hours lecture/27 hours laboratory by arrangement per term
- Prerequisite: DENHY-134 and DENHY-225 or equivalents
- Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course provides an introduction to service-learning experiences related to the study of oral health promotion and disease prevention for groups of people. The process of community health program development including assessment, planning, implementation and evaluation will be emphasized. CSU
DENHY-227 Advanced Periodontics and Dental Hygiene Topics
2 units LR
• 36 hours lecture per term
• Prerequisite: DENHY-120 or equivalent
• Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course presents advanced concepts of dental hygiene theory, comprehensive dental hygiene assessment, and treatment planning. Topics will include evidence-based decision making, powered instrumentation, dentinal hypersensitivity, periodontal pharmacology/chemotherapies to control disease activity, advanced instrumentation techniques and root morphology, sharpening skills, periodontal/restorative relationships, evolving technology for evaluation of oral lesions, and practice with comprehensive dental hygiene treatment planning. CSU

DENHY-230 Advanced Clinical Dental Hygiene Care I
6 units LR
• 18 hours lecture/279 hours laboratory per term
• Prerequisite: DENHY-120 and DENHY-127 or equivalents
• Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course continues and expands development of dental hygiene skills in preventive therapy, oral prophylaxis, periodontal initial preparation, periodontal maintenance therapy, scaling and root debridement procedures, pain control and gingival curettage as well as adjunct therapeutic skills. Dental hygiene assessment (diagnostic) and dental hygiene care planning skills will continue to be developed leading to clinical competency. Techniques in the use and interpretation of radiographs, infection control and office procedures will be developed. CSU

DENHY-231 Advanced Clinical Dental Hygiene Care II
6.5 units LR
• 18 hours lecture/306 hours laboratory per term
• Prerequisite: DENHY-120 and DENHY-127 or equivalents
• Limitation on enrollment: Acceptance to the Diablo Valley College Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course is a continuation of the advanced clinical dental hygiene care course designed to lead toward the achievement of entry level clinical competence in preventive oral health care, oral prophylaxis, initial therapy and supportive periodontal therapy. Students will become entry level competent in scaling and debridement procedures, administration of local anesthetics and nitrous-oxide sedation, and gingival curettage as well as adjunct therapeutic skills such as the local placement of antimicrobial agents. Dental hygiene assessment, diagnosis (based on human need theory) and dental hygiene care planning skills will be refined. Techniques in use and interpretation of radiographs, infection control and time management will be further developed. CSU

DENHY-290 Transitioning from Student to Dental Professional
1 unit SC
• 18 hours lecture per term
• Prerequisite: DENHY-120 or DENTL-180 or equivalent
• Limitation on enrollment: Acceptance to the Diablo Valley College Dental Assisting or Dental Hygiene program, including current TB Clearance, Hepatitis immunization and/or titer, tetanus vaccination, malpractice insurance, and current CPR certification (Basic Life Support for the Healthcare Provider with Automated External Defibrillator [AED]).

This course will prepare students to transition into professional practice in dentistry. Marketing skills, resume and portfolio preparation, interviewing techniques, methods of compensation, malpractice insurance, and navigating licensure applications are emphasized. CSU

DENHY-295 RDH Examination Preparation
.5 unit P/NP
• 27 hours laboratory per term
• Prerequisite: DENHY-231 or equivalent

Advanced clinical dental hygiene experience with emphasis on preparation for the Registered Dental Hygienist (RDH) Examination: including patient selection, preparation, self/peer evaluation to enhance performance on the State of California license examination.
DENHY-298 Independent Study
.5-3 units SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

DENHY-299 Student Instructional Assistant
.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

Drama

Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

Possible career opportunities
Most careers related to theatre require education beyond the associate degree, however, an understanding and mastery of technical theatre skills provides some preparation for work in local community and professional theatre. Possible career options include: set designer, model builder, makeup artist, lighting designer, stage manager, scenic artist, set builder, set carpenter, set painter, stage technician, sound technician, prop maker, and lighting operator.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts degree
Technical theater

Students completing the program will be able to...
A. exhibit the unique collaborative skills necessary to participate in a theater community.
B. develop the basic skills required in the craft of theater.
C. demonstrate the ability to articulate the creative process of theatrical tasks.

The program in technical theater prepares students for an entry-level career in community and professional theater. Careers may include scene shop technician, property artisan, electrician, costume technician, makeup technician, scenic artist, or stage manager. The program also prepares students who wish to expand their careers to entry-level technical video and film positions, as well as entry into a four-year university or professional school.

While this program of study is not designed as a transfer program, selected courses in the program meet lower division requirements for the bachelor of arts degree at many California State University and University of California campuses. Consult with department faculty and a college counselor for more information.

Students must complete each course used to meet a major or certificate requirement with a “C” grade or higher, maintain an overall GPA of 2.5 or higher in the coursework required for the certificate and/or degree. Students who wish to apply for the associate degree must also complete general education requirements as listed in the catalog.

The certificate program can also be used as the “major” that is required for the associate in arts degree in technical theater at Diablo Valley College.

major requirements:

| Course Code | Course Title                                      | Units
|-------------|--------------------------------------------------|--------
| DRAMA-111   | Introduction to Lighting Design                  | 3      |
| DRAMA-112   | Introduction to Stage Makeup                     | 3      |
| DRAMA-200   | Introduction to Technical Theater                | 3      |
| DRAMA-201   | Technical Theater Laboratory                     | 1-2    |

plus at least 3 units from:

| Course Code | Course Title                                      | Units
|-------------|--------------------------------------------------|--------
| DRAMA-122   | Basic Principles of Acting                       | 3      |
| DRAMA-123   | Intermediate Principles of Acting                | 3      |
| DRAMA-124   | Advanced Principles of Acting                    | 6      |
| DRAMA-127   | Auditioning Techniques                           | 3      |

plus at least 3 units from:

| Course Code | Course Title                                      | Units
|-------------|--------------------------------------------------|--------
| DRAMA-139   | Introduction to Theater                          | 3      |
| DRAMA-140   | History of the Theater: Pre-Greek to 17th Century| 3      |
| DRAMA-141   | History of the Theater: 17th Century to Present  | 3      |
| DRAMA-180   | Literature of World Drama: Pre-Greek to 17th Century to Present | 3 |
| DRAMA-181   | Literature of World Drama: 17th Century to Present | 3 |

plus at least 3 units from:

| Course Code | Course Title                                      | Units
|-------------|--------------------------------------------------|--------
| DRAMA-295   | Occupational Work Experience                     | 1-4    |
| DRAMA-296   | Internship in Occupational Work                  | 1-4    |

Education in DRAMA
Experience Education in DRAMA
plus at least 9 units from:
ARCHI-130 Architectural Graphics I ......................................3
ART-105 Drawing I ............................................................3
ART-106 Drawing II ..........................................................3
ART-108 Figure Drawing II ..................................................3
ARTDM-130 Introduction to Digital Audio ..................................3
ARTDM-149 Fundamentals of Digital Video ................................3
ARTDM-160 3D Modeling and Animation I ..............................3
DRAMA-113 Introduction to Costume Design ............................3
DRAMA-130 Principles of Directing ........................................3
DRAMA-230 Directing Projects ..............................................1-2
DRAMA-260 Technical Theater Practicum ................................1-2
DRAMA-270 Stage Production ...............................................1-2
DRAMA-298 Independent Study .............................................0.5-3
ENGTC-119 Introduction to Technical Drawing ........................3
ENGTC-126 Computer Aided Design and Drafting - AutoCAD ...3
FTVE-120 Introduction to TV Studio Production ........................3
FTVE-160 Introduction to Film Production ...............................3
MUSX-172 Introduction to Electronic Music and MIDI ..............3
total minimum required units 28

*Note: Students may apply either DRAMA-260 or DRAMA-270 to major requirements.

Associate in arts in theater arts for transfer

Students completing the program will be able to:
A. demonstrate skill in performing or crewing a production.
B. analyze historical and contemporary theatrical literature.

The associate in arts in theater arts for transfer (AA-T) at Diablo Valley College prepares students to move into a program at a CSU university leading to a baccalaureate degree in theater arts. Completion of a B.A. in theater arts can lead to professional careers in acting, technical theater, stage management, stage direction, and design. In addition, many students find the completion of a theatre arts degree a complementary preparation for careers in education, law, communications, and psychology.

The associate in arts in theater arts for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:
- Complete 60 semester CSU-transferable units
- Complete the California State University-General Education-pattern (CSU GE) or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester or 27 quarter units in the major or area of emphasis as determined by the community college district
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of C or higher in all courses required for the major or area of emphasis.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Students must complete each course used to meet a major requirement with a “C” grade or higher. Some courses in the major satisfy both major and CSU GE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate degree.

Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

major requirements: units
DRAMA-122 Basic Principles of Acting ..................................3
plus at least 3 units from:
DRAMA-139 Introduction to Theater ..................................3
DRAMA-145 History of the Theater: Pre-Greek to 17th Century ..3
plus at least 3 units from:
DRAMA-201 Technical Theater Laboratory ............................1-2*
DRAMA-270 Stage Production .............................................1-2*

Certificate of achievement

Technical theater

Students completing the program will be able to:
A. exhibit the unique collaborative skills necessary to participate in a theater community.
B. develop basic skills required in the craft of theater.
C. demonstrate the ability to articulate the creative process of theatrical tasks.

required courses: units
DRAMA-111 Introduction to Lighting Design .........................3
DRAMA-112 Introduction to Stage Makeup ............................3
DRAMA-113 Introduction to Costume Design ........................3
DRAMA-123 Intermediate Principles of Acting ......................3
DRAMA-200 Introduction to Technical Theater ........................3
DRAMA-201 Technical Theater Laboratory ............................1-2

plus at least 3 units from:
DRAMA-122 Basic Principles of Acting ..................................3
DRAMA-123 Intermediate Principles of Acting ......................3
DRAMA-124 Advanced Principles of Acting ..........................6
DRAMA-127 Auditioning Techniques .....................................3
plus at least 3 units from:

- DRAMA-139 Introduction to Theater .......................................................... 3
- DRAMA-140 History of the Theater: Pre-Greek to 17th Century .................. 3
- DRAMA-141 History of the Theater: 17th Century to Present ....................... 3
- DRAMA-180 Literature of World Drama: Pre-Greek to 17th Century ...... 3
- DRAMA-181 Literature of World Drama: 17th Century to Present .............. 3

plus at least 3 units from:

- DRAMA-295 Occupational Work Experience Education in DRAMA ............. 1-4
- DRAMA-296 Internship in Occupational Work Experience Education in DRAMA .... 1-4

plus at least 9 units from:

- ARCHI-130 Architectural Graphics I ......................................................... 3
- ART-105 Drawing I .................................................................................. 3
- ART-106 Drawing II ................................................................................ 3
- ART-108 Figure Drawing II ........................................................................ 3
- ARTDM-130 Introduction to Digital Audio ................................................ 3
- ARTDM-149 Fundamentals of Digital Video ............................................ 3
- ARTDM-160 3D Modeling and Animation I ............................................... 3
- DRAMA-113 Introduction to Costume Design .......................................... 3
- DRAMA-130 Principles of Directing .......................................................... 3
- DRAMA-230 Directing Projects ................................................................ 1-2
- DRAMA-260* Technical Theater Practicum .............................................. 1-2
- DRAMA-270* Stage Production ................................................................ 1-2
- DRAMA-298 Independent Study ............................................................... 0.5-3
- ENGT-119 Introduction to Technical Drawing ......................................... 3
- ENGT-126 Computer Aided Design and Drafting – AutoCAD .................. 3
- FTVE-120 Introduction to TV Studio Production ........................................ 3
- FTVE-160 Introduction to Film Production ............................................... 3
- MUSX-172 Introduction to Electronic Music and MIDI ................................ 3

**total minimum required units** 28

*Note: Students may apply either DRAMA-260 or DRAMA-270 to certificate requirements.

**Limitations on enrollment**

Effective Fall term 2013, changes to the regulations that govern community college enrollments placed limitations on the number of courses that students may take in certain disciplines within the Contra Costa Community College District. The charts below indicate which Diablo Valley College (DVC) courses are assigned to groups of courses (“families”) for which limitations have been imposed. Certain courses within certain “families” may be repeated (see catalog description), however, students are limited to four enrollments within the family. Certain DVC courses are equivalent to courses at Los Medanos College and Contra Costa College. An enrollment in an equivalent course at one of those colleges will count toward the allowable four enrollments within the family.

**NOTE:** Diablo Valley College may offer experimental or topics courses. When appropriate, based on content, such courses will be assigned to a “family” and that enrollment will be counted as an experience within the “family”.

**DRAMA**

**Family: Acting**

- DRAMA-122 Basic Principles of Acting
- DRAMA-123 Intermediate Principles of Acting
- DRAMA-124 Basic Principles of Acting
- DRAMA-125 Advanced Styles in Scene Study: From Shakespeare to Shaw

- DRAMA-155SC Stage Conflict
- DRAMA-155SH Solving Shakespeare
- DRAMA-155XX Advanced Acting Styles in Early Modern Theater

**Family: Audition**

- DRAMA-126 Audition and Preparation for the Camera
- DRAMA-127 Audition Techniques
- DRAMA-128 Auditioning and Preparation for the Camera II
- DRAMA-155KC KCAC Theater Fest Competition

**Family: Directing**

- DRAMA-130 Principles of Directing
- DRAMA-230 Directing Projects
- DRAMA-155AC Directing the One-Act
- DRAMA-155NV Devised Theater

**Family: Musical Theater**

- DRAMA-150 Children’s Theater
- DRAMA-170 Introduction to Musical Theater I
- DRAMA-171 Musical Theater II
- DRAMA-155VA Acting in Musicals

**Family: Performance Acting**

- DRAMA-270 Stage Production

**Family: Performance - Musical Theater**

- DRAMA-275 Musical Theater Production

**Family: Production/Technical Theater**

- DRAMA-201 Technical Theater Laboratory
- DRAMA-202 Fundamentals of Stage Production - Technical Theater
- DRAMA-260 Technical Theater Practicum

**DRAMA-111 Introduction to Lighting Design**

- 3 units  
  - **SC**  
  - *54 hours lecture per term*

This course will present the theory and techniques of stage lighting including the function of lighting equipment, the operation of basic dimmer systems, and the creation of lighting designs for selected scenes from plays. C-ID THTR 173, CSU, UC
DRAMA-112 Introduction to Stage Makeup
3 units SC
- 54 hours lecture per term
This course presents the study of stage makeup. Corrective makeup, aging techniques, and procedures of stage makeup, which are in line with a play’s given circumstances, and abstract/linear makeup design projects will be covered. C-ID THTR 175, CSU, UC

DRAMA-113 Introduction to Costume Design
3 units SC
- 36 hours lecture/27 hours laboratory by arrangement per term
This course is an introduction to theatrical costume design. Topics include beginning construction theories, techniques, basic applications and practices. Various fabrics, basic pattern, wardrobe plotting, and historical styles will be covered. C-ID THTR 174, CSU, UC

DRAMA-114 Script Analysis
3 units SC
- 54 hours lecture per term
This course explores the analysis of play scripts. Consideration is given to the historical and cultural context of various kinds of scripts, the bearing of technological change on the way script is understood. C-ID THTR 114, CSU, UC

DRAMA-122 Basic Principles of Acting
3 units SC
- 54 hours lecture per term
This course focuses on beginning acting fundamentals with an emphasis on the heightening and focusing of physical and vocal energy. Students will learn how to incorporate stage movement, memorization, character work to prepare them to work on the stage. C-ID THTR 151, CSU, UC

DRAMA-123 Intermediate Principles of Acting
3 units SC
- 54 hours lecture per term
- Recommended: DRAMA-122 or equivalent
This course continues to develop the heightened physical and vocal energies needed for stage, and introduces complex elements in scene study. Students continue their work in addressing instrumental hypertension, and learn specific ways to apply the use of the imagination to the preparation and performance of a scene on stage. C-ID THTR 152, CSU, UC

DRAMA-124 Advanced Principles of Acting
6 units SC
- 108 hours lecture per term
- Prerequisite: DRAMA-123 or equivalent
- Limitation on enrollment: Audition required; see schedule of classes for specific days and times.
This course is a study of advanced acting with extensive focus on selected scenes from contemporary realism. The course covers an organic approach to acting based on the principles of Constantin Stanislavski. Special emphasis is placed on script analysis, personalization, and intensive listening and receptivity work with partners. CSU, UC

DRAMA-125 Advanced Styles in Scene Study: From Shakespeare to Shaw
6 units SC
- 108 hours lecture per term
- Prerequisite: DRAMA-124 or equivalent
- Limitation on enrollment: Audition required; see schedule of classes for specific days and times.
This course applies the skills and techniques learned in DRAMA-124 to a range of different theatrical genres and styles. Students will analyze, prepare, and perform scenes from a wide variety of historical periods and genres, which may include Classical, Restoration, Theater of the Absurd, and Early Modernism. This course will help the serious drama student prepare for a career in the competitive, professional theater. CSU, UC

DRAMA-126 Auditioning and Preparation for the Camera
3 units SC
- 54 hours lecture per term
- Recommended: DRAMA-123 or equivalent
This course covers practical training and experience in working on camera for the actor. Close attention will be paid to adapting acting techniques that have special application to working in television and film. CSU, UC

DRAMA-127 Auditioning Techniques
3 units SC
- 54 hours lecture per term
- Recommended: DRAMA-122 or equivalent
This course will cover the elements of auditioning techniques that include: monologue selection and styles, cold reading, actor’s preparation, research, resume development, and practical application of acting techniques for audition purposes. Students will learn to prepare for college, community and professional theater auditions as well as create a portfolio of audition material. CSU
DRAMA-128  Auditioning and Preparation for the Camera II
3 units  SC
- 54 hours lecture per term
- Prerequisite: DRAMA-126 or equivalent
- Recommended: DRAMA-123 or equivalent

This course will continue to build skills learned in DRAMA-126 with students learning more advanced techniques for auditioning for television and film. Students will use scripts from a variety of film and television styles, explore techniques such as: script analysis for camera work, continuity of takes, hitting a mark, finding and working in key light, and using various frame sizes such as long, medium, and close-up shots. This course will also examine the business side of the film and television industry with emphasis on auditioning, talent agents, casting directors, and demo reels. CSU

DRAMA-130  Principles of Directing
3 units  SC
- 54 hours lecture per term
- Recommended: DRAMA-123 or equivalent; concurrent enrollment in DRAMA-230 or equivalent; eligibility for ENGL-122 or equivalent

This course covers the function of the stage director; the preparation of a play script from the first reading through casting, rehearsals, and performance. Emphasis will be placed on theory of directing as well as on its practical application for the stage. CSU, UC

DRAMA-139  Introduction to Theater
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This introductory course surveys the roles of actors, directors, playwrights, and designers, in the development of theatrical works. The multiple disciplines of theater throughout history are examined. It will also cover the origins of theater, dramatic structure, the audience and theater performance spaces. C-ID THTR 111, CSU, UC

DRAMA-140  History of the Theater: Pre-Greek to 17th Century
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course is an historical survey of dramatic art from the period of pre-Greek civilization to the Elizabethan Renaissance. Students will examine the various influences that led to the development and evolution of theater in various cultures and time periods. C-ID THTR 113, CSU, UC

DRAMA-141  History of the Theater: 17th Century to Present
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course is an historical survey of dramatic art from the period of the Elizabethan Renaissance to the present. Students will examine the various influences that led to the development and evolution of theater in various cultures and time periods. CSU, UC

DRAMA-142  Multicultural Perspectives in American Theater
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course will explore and evaluate contemporary dramatic literature (1965-present) of Native-American, African-American, Asian-Pacific American and Chicano/Latino cultures. The historical as well as the cultural and social conditions in which these plays developed will also be examined. CSU, UC

DRAMA-150  Children's Theater
3 units  SC
- 54 hours lecture per term

This is a course in the theory, principle, and practice of children's theater. It features the creation of a series of scenes or a full length children's theater work using dialogue, singing, and dancing, with emphasis on techniques used in performance for a young audience. Students will explore the roles of performers, designers, and dramaturges in the creation of contemporary theater for children. CSU

DRAMA-155  Topics in Drama
.3-4 units  SC
- Variable hours

A supplemental course in drama to provide a study of current concepts, problems, and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

DRAMA-157  Topics in Technical Theater
.3-4 units  SC
- Variable hours

A supplemental course in technical theater to provide a study of current concepts, problems and related subdivisions. Specific topics will be announced in the schedule of classes. CSU
This course develops performance skills combining singing, dancing, and acting in the presentation of scenes from musical theater. Students will learn and integrate acting, movement, and singing skills to create a believable character on stage. Rehearsal and performance techniques for a wide variety of musical theater styles and historical periods will be covered. CSU, UC

This course is a study of advanced musical theater with extensive focus on selected scenes and songs from the musical theater genre. The course continues to develop skills and techniques learned in DRAMA-170, with emphasis on singing, acting, blocking, and choreographed dance movement. Students will analyze and prepare musical theater materials including ballads, up-tempo, duets, trios, and group songs, and will continue to introduce students to a body of musical theater literature, composers, lyricists, and librettists. CSU, UC

This course examines great works of world dramatic literature from the period of pre-Greek civilization to the Elizabethan Renaissance. Through reading, writing, scene work, and viewing stage and film productions, students will gain an understanding of how the transformation of great dramatic literature from text to performance had a profound influence on past civilizations, and how it continues to have an influence today. CSU, UC

This course examines works of great dramatic literature from the period of the Elizabethan Renaissance to the present day. Through reading, writing, scene work, and viewing stage and film productions, students will gain an understanding of how the transformation of great dramatic literature from text to performance had a profound influence on past civilizations, and how it continues to have an influence today. CSU, UC

This course provides a theoretical as well as a practical overview of the elements of technical theater. Safety precautions, stage management, stage design, scenery, lighting, sound, acting, make-up, and costuming are among the topics to be presented. The course will also cover possible job opportunities in technical theater. C-ID THTR 192, CSU, UC

This course will provide students with the practical applications of various aspects of technical theater. Students will obtain hands-on experience working on main stage productions, arena productions, and student-directed projects. They will assist in the following areas: stage management, stage design, scenery construction, painting for the stage, properties, lighting, sound, make-up, and costuming. Students will also learn safety procedures for working in the shop and for working on staged performances. C-ID THTR 192, CSU, UC

This is an open entry open exit course where students participate in a technical theater capacity in a faculty directed stage production. Technical theater students are introduced to participating in a full length production in a variety of ways; working with sets, sound, lighting, painting, costume, stage management, and props. Students will be introduced to professional rehearsal and performance standards. All projects culminate in public performance. The organization and function of the technical staff, the structure of the physical theater, and job opportunities in technical theater will also be discussed. CSU, UC

This course provides students the opportunity to practice skills learned in DRAMA-130. Students will prepare and direct a scene or one act from script selection through performance. Students will cast, rehearse, and stage a variety of scenes or one acts; projects may culminate in limited public performance. Emphasis is placed on the director-actor relationship and creating effective staging. CSU, UC
DRAMA-260  Technical Theater Practicum
1-2 units  SC
• May be repeated three times
• Variable hours
• Limitation on enrollment: Interview with instructor and student director required. Specific days and times are announced in the Schedule of Classes.
• Recommended: DRAMA-200 and 201 or equivalent
• Note: This is an open-entry, open-exit course.

This course allows technical theater students to receive practical experience through participation in student-directed projects. CSU, UC

DRAMA-270  Stage Production
1-2 units  SC
• May be repeated three times
• Variable hours
• Limitation on enrollment: Audition required. Specific days and times are announced in the Schedule of Classes.
• Recommended: DRAMA-122 or equivalent
• Note: This is an open entry, open exit course.

After audition and evaluation the students participate in a full-length stage production, with emphasis on rehearsal, character development and collaborative production techniques. All projects will culminate in public performance. C-ID THTR 191, CSU, UC

DRAMA-275  Musical Theater Production
1-2 units  SC
• May be repeated three times
• Variable hours
• Prerequisite: Audition

This is an open entry open exit course where students participate in a faculty directed musical theater stage production, with emphasis on the combination of singing, dancing, and acting. Musical Theater Production will focus on how to use musicality, song, and dance, to embody emotional life for performance on stage in a musical theater production. Students will be introduced to professional rehearsal and performance standards. All projects culminate in public performance. CSU, UC

DRAMA-295  Occupational Work Experience Education in DRAMA
1-4 units  SC
• May be repeated three times
• Variable hours
• Note: In order to enroll in DRAMA-295, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

DRAMA-296 is supervised employment in a skilled or professional level assignment in the student’s major field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

DRAMA-298  Independent Study
1-3 units  SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

DRAMA-299  Student Instructional Assistant
.5-3 units  SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
Early childhood education

**EARLY CHILDHOOD EDUCATION – ECE**

Obed Vazquez, Dean
Social Sciences Division
Faculty Office Building, Room 136

**Possible career opportunities**
Early childhood educators focus on children from zero to age five. Some of the positions held by early childhood professionals are: classroom aide, ECE teacher, site supervisor, program director, child care provider, adult educator of families and other professionals, resource and referral professional, social service worker, youth and family service worker, camp counselor, recreation leader, foster care provider, mental health paraprofessional, or child advocate.

**Program-level student learning outcomes**
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at [www.dvc.edu/slo](http://www.dvc.edu/slo).

**Associate in science degree**
**Early childhood education**

Students completing this program will be able to...
A. identify developmentally appropriate activities for infants, toddlers and preschool age children.
B. analyze the psychological, physical and cognitive influences on child development.
C. apply the professional code of ethics.
D. evaluate strategies to maximize the health, safety and nutrition of children in early childhood education programs.
E. create a developmentally appropriate integrated curriculum.
F. assess how socializing agents impact the lives of children and families.
G. apply the principles of anti-bias pedagogy.
H. apply observation and assessments to create appropriate environments.
I. apply positive guidance skills with young children.
J. apply constructivist theory and intentional teaching methodologies to teacher child interactions.

The associate in science program in early childhood education is designed as a two-year curricular pathway that offers students a broad general education while integrating an in-depth study in child development and theory, principles and practices in early care and education. The early childhood education program prepares students for various careers working directly with children, families and other adults in the early childhood profession.

To earn a degree, students must complete each of the courses required for the major with a “C” grade or higher and complete general education requirements as listed in the catalog. Attending classes in the day, the evening or both can complete degree requirements.

**major requirements:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE-123</td>
<td>Introduction to Curriculum in Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE-124</td>
<td>Child Development and Psychology</td>
<td>3</td>
</tr>
<tr>
<td>ECE-125</td>
<td>Principles and Practices of Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE-126</td>
<td>Health, Safety, and Nutrition for the Young Child</td>
<td>3</td>
</tr>
<tr>
<td>ECE-128</td>
<td>Advanced Curriculum Development in ECE</td>
<td>3</td>
</tr>
<tr>
<td>ECE-130</td>
<td>Child, Family, and Community</td>
<td>3</td>
</tr>
<tr>
<td>ECE-144</td>
<td>Diversity in Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE-249</td>
<td>Observation and Assessment in the Classroom</td>
<td>4</td>
</tr>
<tr>
<td>ECE-250</td>
<td>Practicum in Early Childhood Education</td>
<td>4</td>
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**total minimum required units:** 29

**recommended degree electives:**

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>ECE-129</td>
<td>Dealing with Difficult and Aggressive Young Children</td>
<td>3</td>
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<tr>
<td>ECE-150</td>
<td>Topics in Child Development</td>
<td>1-3</td>
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<tr>
<td>ECE-151</td>
<td>Topics in Cognitive Development</td>
<td>1-3</td>
</tr>
<tr>
<td>ECE-152</td>
<td>Topics in Physical Development</td>
<td>1-3</td>
</tr>
<tr>
<td>ECE-153</td>
<td>Topics in the Role of Play in Development</td>
<td>1-3</td>
</tr>
<tr>
<td>ECE-154</td>
<td>Topics in Personality Development</td>
<td>1-3</td>
</tr>
<tr>
<td>ECE-155</td>
<td>Topics in Child Behavior</td>
<td>1-3</td>
</tr>
<tr>
<td>ECE-220</td>
<td>Programs for the School Age Child</td>
<td>3</td>
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<tr>
<td>ECE-230</td>
<td>Developmentally Appropriate Practice for Infants and Toddlers</td>
<td>3</td>
</tr>
<tr>
<td>ECE-231</td>
<td>Infant and Toddler Development</td>
<td>3</td>
</tr>
<tr>
<td>ECE-237</td>
<td>Current Topics in Early Childhood Education</td>
<td>0.5-3</td>
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<tr>
<td>ECE-240</td>
<td>Language and Literacy for the Young Child</td>
<td>3</td>
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<tr>
<td>ECE-241</td>
<td>Science and Mathematics for Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE-242</td>
<td>Music for the Young Child</td>
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<td>ECE-243</td>
<td>Creative Art for the Young Child</td>
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<td>ECE-251</td>
<td>Administration I: Programs in Early Childhood Education</td>
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<td>ECE-252</td>
<td>Administration II: Personnel and Leadership in ECE</td>
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<tr>
<td>ECE-253</td>
<td>Adult Supervision and Mentoring in Early Childhood Classrooms</td>
<td>2</td>
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<tr>
<td>ECE-269</td>
<td>Children with Special Needs</td>
<td>3</td>
</tr>
<tr>
<td>ECE-298</td>
<td>Independent Study</td>
<td>0.5-3</td>
</tr>
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</table>
**Associate in science in early childhood education for transfer**

Students completing this program will be able to...

A. identify developmentally appropriate activities for infants, toddlers and preschool age children.
B. analyze the psychological, physical and cognitive influences on child development.
C. apply the professional code of ethics.
D. evaluate strategies to maximize the health, safety and nutrition of children in early childhood education programs.
E. create a developmentally appropriate integrated curriculum.
F. assess how socializing agents impact the lives of children and families.
G. apply the principles of anti-bias pedagogy.
H. apply observation and assessments to create appropriate environments.
I. apply positive guidance skills with young children.

The associate in science in early childhood education for transfer is a 60 unit degree program designed to prepare students to transfer and study child development, human development, and early childhood education. Students will be prepared to take upper division courses their first semester after transferring. Typically, students who complete this program will be able to complete their upper division coursework in only two additional years. In addition to preparation for transfer, this degree also prepares students for various careers working directly with children, families and other adults in the early childhood profession. Upon completion of this program, students will be eligible to apply for the Child Development Permit, which is required to work in federal and state funded programs for children aged 0-5.

Students completing the program will be able to...

A. create a developmentally appropriate integrated curriculum.
B. analyze the psychological, physical and cognitive influences on child development.
C. identify the principles and ideals of the Early Childhood Education Profession.
D. assess how socializing agents and culture impact the lives of children and families.

In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain of a minimum grade point average (GPA) of 2.0.
- Earn a grade of "C" or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor's degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSU GE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate's degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

**Certificate of achievement**

**Early childhood education - Associate teacher**

Students completing the program will be able to...

A. create a developmentally appropriate integrated curriculum.
B. analyze the psychological, physical and cognitive influences on child development.
C. identify the principles and ideals of the Early Childhood Education Profession.
D. assess how socializing agents and culture impact the lives of children and families.

This certificate meets the education requirements for the associate teacher level of the Child Development Permit Matrix issued by the State of California Commission on Teacher Credentialing and Community Care Licensing, Title 22 requirements for a fully qualified teacher. After meeting additional experience requirements, graduates are qualified to apply for a Child Development Permit, which is required to work in federal and state funded programs for children aged 0-5.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a "C" grade or higher. Attending classes in the day, the evening, or both can complete certificate requirements.
Early childhood education

required courses:    units
ECE-123  Introduction to Curriculum in Early Childhood Education .................................................. 3
ECE-124  Child Development and Psychology ................................................................. 3
ECE-125  Principles and Practices of Early Childhood Education .................................................. 3
ECE-130  Child, Family, and Community ................................................................. 3

total minimum required units 12

Certificate of achievement
Early childhood education - Basic

Students completing this program will be able to...
A. identify developmentally appropriate activities for infants, toddlers and preschool age children.
B. apply observation and assessments to create appropriate environments.
C. apply the professional code of ethics.
D. apply positive guidance skills with young children.
E. apply constructivist theory and intentional teaching methodologies to teacher child interactions.
F. apply the principles of anti-bias pedagogy.
G. apply observation and assessments to create appropriate environments.
H. demonstrate techniques for guiding adults working with young children.
I. identify developmentally appropriate activities for infants, toddlers and preschool age children.
J. demonstrate techniques for guiding adults working with young children.
K. develop positive relationships and responsive interactions with young children.

This certificate prepares students to meet the demands of today's childcare centers, preschool programs, and nursery schools. The certificate meets the California State Department of Social Services, Community Care Licensing Title 22, and Division 12 requirements for a fully qualified teacher. The early childhood education basic certificate is an alternative certificate to the California State Matrix and to the child development certificate.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Attending classes in the day, the evening, or both can complete certificate requirements.

required courses:    units
ECE-123  Introduction to Curriculum in Early Childhood Education .................................................. 3
ECE-124  Child Development and Psychology ................................................................. 3
ECE-125  Principles and Practices of Early Childhood Education .................................................. 3
ECE-126  Health, Safety, and Nutrition for the Young Child ......................................................... 3
ECE-128  Advanced Curriculum Development in ECE ......................................................... 3
ECE-130  Child, Family, and Community ................................................................. 3
ECE-144  Diversity in Early Childhood Education ......................................................... 3
ECE-249  Observation and Assessment in the Classroom ......................................................... 4
ECE-250  Practicum in Early Childhood Education ......................................................... 4

total minimum required units 29

Certificate of achievement
Early childhood education - Master teacher

Students completing this program will be able to...
A. create a developmentally appropriate integrated curriculum.
B. analyze the psychological, physical and cognitive influences on child development.
C. identify and apply the principles and ideals of the Early Childhood Education Profession.
D. assess how socializing agents and culture impact the lives of children and families.
E. evaluate strategies to maximize the health, safety and nutrition of children in early childhood education programs.
F. apply the principles of anti-bias pedagogy.
G. develop positive relationships and responsive interactions with young children.
H. demonstrate techniques for guiding adults working with young children.
I. implement the observe, plan, document, reflect and assess cycle for curriculum planning.
J. demonstrate knowledge in a specialization area.
K. apply constructivist theory and intentional teaching methodologies to teacher child interactions.

The following certificates meet the education requirements for the associate teacher, teacher, master teacher and site supervisor levels of the Child Development Permit Matrix issued by the State of California Commission on Teacher Credentialing. After meeting additional experience requirements, graduates are qualified to apply for a Child Development Permit, which is required to work in federal and state funded programs for children aged 0-5.

This childhood development certificate meets the education requirements for the master teacher level of the Child Development Permit Matrix issued by the State of California Commission on Teacher Credentialing. After meeting additional experience requirements, graduates are qualified to apply for a Child Development Permit, which is required to work in federal and state funded programs for children aged 0-5.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Attending classes in the day, the evening, or both can complete certificate requirements.
### Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE-123</td>
<td>Introduction to Curriculum in Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE-124</td>
<td>Child Development and Psychology</td>
<td>3</td>
</tr>
<tr>
<td>ECE-125</td>
<td>Principles and Practices of Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE-126</td>
<td>Health, Safety, and Nutrition for the Young Child</td>
<td>3</td>
</tr>
<tr>
<td>ECE-128</td>
<td>Advanced Curriculum Development in ECE</td>
<td>3</td>
</tr>
<tr>
<td>ECE-130</td>
<td>Child, Family, and Community</td>
<td>3</td>
</tr>
<tr>
<td>ECE-144</td>
<td>Diversity in Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE-249</td>
<td>Observation and Assessment in the Classroom</td>
<td>4</td>
</tr>
<tr>
<td>ECE-250</td>
<td>Practicum in Early Childhood Education</td>
<td>4</td>
</tr>
<tr>
<td>ECE-253</td>
<td>Adult Supervision and Mentoring in Early Childhood Classrooms</td>
<td>2</td>
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</tbody>
</table>

**Creative Expression**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE-237*</td>
<td>Current Topics in Early Childhood Education</td>
<td>0.5-3</td>
</tr>
<tr>
<td>ECE-242</td>
<td>Music for the Young Child</td>
<td>1</td>
</tr>
<tr>
<td>ECE-243</td>
<td>Creative Art for the Young Child</td>
<td>1</td>
</tr>
</tbody>
</table>

**Or one course from:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART-155</td>
<td>Ceramic Sculpture I</td>
<td>3</td>
</tr>
<tr>
<td>ART-160</td>
<td>Photography I</td>
<td>3</td>
</tr>
<tr>
<td>DRAMA-150</td>
<td>Children's Theater</td>
<td>3</td>
</tr>
<tr>
<td>KNDAN-100</td>
<td>Introduction to Dance</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNDAN-110A</td>
<td>Ballet Fundamentals I</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNDAN-130A</td>
<td>Modern Dance Fundamentals I</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KCAN-160A</td>
<td>Tap Dance I</td>
<td>0.5-2</td>
</tr>
<tr>
<td>MUSIC-101</td>
<td>Beginning Guitar</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC-102</td>
<td>Intermediate Guitar</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC-112</td>
<td>America's Music - A Multicultural Perspective</td>
<td>3</td>
</tr>
<tr>
<td>MUSCI-150</td>
<td>Beginning Piano I</td>
<td>1</td>
</tr>
<tr>
<td>MUSCI-151</td>
<td>Beginning Piano II</td>
<td>1</td>
</tr>
<tr>
<td>MUSCI-171</td>
<td>Jazz and Popular Solo Voice</td>
<td>1</td>
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</table>

**Miscellaneous**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>SPEDU-101</td>
<td>Introduction to Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>SPEDU-102</td>
<td>Historical Perspectives of Disabilities and the Law</td>
<td>3</td>
</tr>
<tr>
<td>SPEDU-103</td>
<td>Classroom Strategies for the Special Education Paraeducator</td>
<td>3</td>
</tr>
</tbody>
</table>

**Science and Math**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE-237*</td>
<td>Current Topics in Early Childhood Education</td>
<td>0.5-3</td>
</tr>
<tr>
<td>ECE-241</td>
<td>Science and Mathematics for Early Childhood Education</td>
<td>3</td>
</tr>
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</table>

(Note: Two ECE-237 courses in this category are required)

**Sign Language**

<table>
<thead>
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<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>SIGN-280</td>
<td>American Sign Language (ASL) I</td>
<td>3</td>
</tr>
<tr>
<td>SIGN-281</td>
<td>American Sign Language (ASL) II</td>
<td>3</td>
</tr>
<tr>
<td>SIGN-282</td>
<td>American Sign Language (ASL) III</td>
<td>3</td>
</tr>
<tr>
<td>SIGN-283</td>
<td>American Sign Language (ASL) IV</td>
<td>3</td>
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</table>

**Special Needs**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ECE-129</td>
<td>Dealing with Difficult and Aggressive Young Children</td>
<td>3</td>
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<tr>
<td>ECE-269</td>
<td>Children with Special Needs</td>
<td>3</td>
</tr>
<tr>
<td>SIGN-280</td>
<td>American Sign Language (ASL) I</td>
<td>3</td>
</tr>
<tr>
<td>SIGN-281</td>
<td>American Sign Language (ASL) II</td>
<td>3</td>
</tr>
<tr>
<td>SIGN-282</td>
<td>American Sign Language (ASL) III</td>
<td>3</td>
</tr>
<tr>
<td>SIGN-283</td>
<td>American Sign Language (ASL) IV</td>
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**Curriculum**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ECE-237*</td>
<td>Current Topics in Early Childhood Education</td>
<td>0.5-3</td>
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<tr>
<td>ECE-240</td>
<td>Language and Literacy for the Young Child</td>
<td>3</td>
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<tr>
<td>ECE-241</td>
<td>Science and Mathematics for Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE-242</td>
<td>Music for the Young Child</td>
<td>1</td>
</tr>
<tr>
<td>ECE-243</td>
<td>Creative Art for the Young Child</td>
<td>1</td>
</tr>
<tr>
<td>ECE-244</td>
<td>Circle Time Activities</td>
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**Infants and Toddlers**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ECE-230</td>
<td>Developmentally Appropriate Practice for Infants and Toddlers</td>
<td>3</td>
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<tr>
<td>ECE-231</td>
<td>Infant and Toddler Development</td>
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**Language and Literature**

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<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ECE-237*</td>
<td>Current Topics in Early Childhood Education</td>
<td>0.5-3</td>
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<tr>
<td>ENGL-177</td>
<td>Children's Literature</td>
<td>3</td>
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<tr>
<td>L-111</td>
<td>Storytelling</td>
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### Total Minimum Required Units: 53

*Topics for ECE-237 vary. Please contact the Early Childhood Education Department to verify if a specific ECE-237 course meets the requirements for a particular area of specialization.*
Certificate of achievement
Early childhood education - Site supervisor
Students completing this program will be able to...
A. create a developmentally appropriate integrated curriculum.
B. analyze the psychological, physical and cognitive influences on child development.
C. identify and apply the principles and ideals of the Early Childhood Education Profession.
D. assess how socializing agents and culture impact the lives of children and families.
E. evaluate strategies to maximize the health, safety and nutrition of children in early childhood education programs.
F. develop techniques which will create sensitivity for various biases.
G. implement the observe, plan, document, reflect and assess cycle for curriculum planning.
H. develop positive relationships and responsive interactions with young children.
I. demonstrate techniques for guiding adults working with young children.
J. examine theory and methodology for effective supervision.
K. apply ethical codes and licensing standards to practices and policies.
L. identify business requirements for children's centers.
M. examine theory and methodology for effective supervision.

This certificate meets the education requirements for the site supervisor level of the Child Development Permit Matrix issued by the State of California Commission on Teacher Credentialing. After meeting additional experience requirements, graduates are qualified to apply for a Child Development Permit, which is required to work in federal and state funded programs for children aged 0-5.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Attending classes in the day, the evening, or both can complete certificate requirements.

required courses: units
The same courses as required for the Early Childhood Education Teacher Certificate................................................. 45

plus 8 units:
ECE-251 Administration I: Programs in Early Childhood Education.......................... 3
ECE-252 Administration II: Personnel and Leadership in ECE.......................... 3
ECE-253 Adult Supervision and Mentoring in Early Childhood Classrooms ................. 2
total minimum required units 53

Certificate of achievement
Early childhood education - Teacher
Students completing the program will be able to...
A. identify developmentally appropriate activities for infants, toddlers and preschool age children.
B. analyze the psychological, physical and cognitive influences on child development.
C. apply the professional code of ethics.
D. evaluate strategies to maximize the health, safety and nutrition of children in early childhood education programs.
E. create a developmentally appropriate integrated curriculum.
F. assess how socializing agents impact the lives of children and families.
G. apply the principles of anti-bias pedagogy.
H. apply observation and assessments to create appropriate environments.
I. apply positive guidance skills with young children.
J. apply constructivist theory and intentional teaching methodologies to teacher child interactions.

This certificate meets the education requirements for the teacher level of the Child Development Permit Matrix issued by the State of California Commission on Teacher Credentialing. After meeting additional experience requirements, graduates are qualified to apply for a Child Development Permit, which is required to work in federal and state funded programs for children aged 0-5.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Attending classes in the day, the evening, or both can complete certificate requirements.

required courses: units
ECE-123 Introduction to Curriculum in Early Childhood Education.......................... 3
ECE-124 Child Development and Psychology.......................... 3
ECE-125 Principles and Practices of Early Childhood Education.......................... 3
ECE-126 Health, Safety and Nutrition for the Young Child......................................................... 3
ECE-128 Advanced Curriculum Development in ECE.......................... 3
ECE-130 Child, Family, and Community................................................. 3
ECE-144 Diversity in Early Childhood Education.......................... 3
ECE-249 Observation and Assessment in the Classroom................................................. 4
ECE-250 Practicum in Early Childhood Education................................................. 4

plus at least 16 units from:
general education courses................................................. 16
(At least one course each from humanities, social science, science or math, and English)
total minimum required units 45
This course explores essential life skills developed during childhood that make a lifelong difference in our ability to learn, communicate and cope with challenges. Drawing from research in child development and neuroscience, this course outlines practical ways people working with children can foster these skills in young children. CSU

### ECE-101 Media and the Developing Child

1-3 units  P/NP

- Variable hours
- Note: One unit: lecture only. Two units: lecture plus three laboratory hours per week. Three units: lecture plus six hours per week. Participation in the Developmental Children's Center Laboratory School or approved off-campus mentor site is required for laboratory hours. All students enrolled in laboratory must have a negative TB test and verified immunizations against pertussis, measles and influenza (waiver allowed for influenza).

This class investigates popular media and implications for the developing child. Focus is on the impact of media on personality, cognition, social attributes and health. Strategies for assessing media and using it effectively will be explored. CSU

### ECE-102 Childhood and Nature

1-3 units  P/NP

- Variable hours
- Note: One unit: lecture only. Two units: lecture plus three laboratory hours per week. Three units: lecture plus six hours per week. Participation in the Developmental Children's Center Laboratory School or approved off-campus mentor site is required for laboratory hours. All students enrolled in laboratory must have a negative TB test and verified immunizations against pertussis, measles and influenza (waiver allowed for influenza).

This course explores the vital role of children's ongoing experiences with nature as a basis for creativity, problem solving, critical thinking and physical and emotional well-being. It introduces multiple resources and practical hands-on activities that support child-nature connections. CSU

### ECE-103 Brain Development in Childhood

1-3 units  P/NP

- Variable hours
- Note: One unit: lecture only. Two units: lecture plus three laboratory hours per week. Three units: lecture plus six hours per week. Participation in the Developmental Children's Center Laboratory School or approved off-campus mentor site is required for laboratory hours. All students enrolled in laboratory must have a negative TB test and verified immunizations against pertussis, measles and influenza (waiver allowed for influenza).

This class studies the neurological connections that form in a child's brain during pregnancy and early childhood and the long-term effects of environmental factors during these formative years. Topics range from the connections between the brain and emotional regulation to the complexity of language acquisition. CSU

### ECE-104 Cultural Influences on the Developing Child

1-3 units  P/NP

- Variable hours
- Note: One unit: lecture only. Two units: lecture plus three laboratory hours per week. Three units: lecture plus six hours per week. Participation in the Developmental Children's Center Laboratory School or approved off-campus mentor site is required for laboratory hours. All students enrolled in laboratory must have a negative TB test and verified immunizations against pertussis, measles and influenza (waiver allowed for influenza).

This course explores personality development in young children within the context of culture. The interacting forces that shape personality are discussed. Focus is on the role of caregivers in supporting optimal social-emotional development in young children. CSU

### ECE-105 Emotional Intelligence and the Developing Child

1-3 units  P/NP

- Variable hours
- Note: One unit: lecture only. Two units: lecture plus three laboratory hours per week. Three units: lecture plus six hours per week. Participation in the Developmental Children's Center Laboratory School or approved off-campus mentor site is required for laboratory hours. All students enrolled in laboratory must have a negative TB test and verified immunizations against pertussis, measles and influenza (waiver allowed for influenza).

This course explores the development of children's emotional intelligence. The interacting forces that shape emotional intelligence are discussed. Focus is on the role of caregivers in supporting optimal emotional intelligence development in young children. CSU
### ECE-106 Child Behavior: Is This Normal?
1-3 units  P/NP
- Variable hours
- Note: One unit: lecture only. Two units: lecture plus three laboratory hours per week. Three units: lecture plus six hours per week. Participation in the Developmental Children's Center Laboratory School or approved off-campus mentor site is required for laboratory hours. All students enrolled in laboratory must have a negative TB test and verified immunizations against pertussis, measles and influenza (waiver allowed for influenza).

This course explores a broad range of behaviors in young children. Child development information, resources, and suggestions for addressing specific behavior issues will be presented. CSU

### ECE-123 Introduction to Curriculum in Early Childhood Education
3 units  LR
- 54 hours lecture per term
- Prerequisite: ECE-124 or equivalent (may be taken concurrently)
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Meets the Department of Social Services licensing requirement for DSS III Program and Curriculum Development

This course presents an overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age 6. Students will examine a teacher’s role in supporting development and fostering the joy of learning for all young children using observation strategies emphasizing the essential role of play. An overview of content areas will include but not be limited to: language and literacy, social and emotional learning, sensory learning, art and creativity, math and science. C-ID ECE 130, CSU

### ECE-124 Child Development and Psychology
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Meets the State Department of Social Services licensing requirement for DSS I Child/Human Growth and Development

This course examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from conception through adolescence. Emphasis is on the principal theories and research methodologies supporting the understanding of child development. C-ID CDEV 100, CSU, UC

### ECE-125 Principles and Practices of Early Childhood Education
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Meets the State Department of Social Services licensing requirement for DSS III, Program and Curriculum Development

An examination of the principles of developmentally appropriate practices as applied to early childhood education settings. This course includes history and philosophy of early childhood education, the ethics of professional practices, and orientation to careers working with children. Emphasis is placed on types of programs, learning environments, the key role of relationships, constructive adult-child interactions, and teaching strategies supporting the development of all children. C-ID ECE 120, CSU

### ECE-126 Health, Safety, and Nutrition for the Young Child
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Meets the State Department of Social Services licensing requirement for DSS VII, Health and Safety

Introduction to the laws, regulations, standards, policies and procedures and early childhood curriculum related to child health safety and nutrition. The key components that ensure physical health, mental health and safety for both children and staff will be identified along with the importance of collaboration with families and health professionals. Focus on integrating the concepts into everyday planning and program development for all children. C-ID ECE 220, CSU

### ECE-128 Advanced Curriculum Development in ECE
3 units  SC
- 54 hours lecture per term
- Co-requisite: ECE 124 or equivalent (may be taken previously)
- Recommended: ECE-123 and eligibility for ENGL-122 or equivalents
- Note: Meets the State Department of Social Services licensing requirement for DSS III, Program and Curriculum Development

This advanced course will focus on new trends, approaches and techniques in early childhood education curriculum. Students will explore and practice various early childhood education curriculum approaches. CSU
ECE-129  Dealing with Difficult and Aggressive Young Children

3 units  SC
- 54 hours lecture per term
- Co-requisite: ECE-124 or equivalent (may be taken previously)
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Meets the State Department of Social Services licensing requirement for DSS III Program and Curriculum Development

This course is designed to examine the reasons for children's difficult and aggressive behaviors. Strategies for prevention and intervention in the classroom and home will be studied. CSU

ECE-130  Child, Family, and Community

3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Meets the State Department of Social Services licensing requirements for DSS II, Child, Family, and Community

An introduction to the issues involved in early childhood education related to the entire learning environment of a child with emphasis on the family and community. Examination of the impact of family systems and culture on children's development will occur. Study of community and society as it impacts the family and the child with an introduction to community resources available to support contemporary family life. C-ID CDEV 110, CSU

ECE-144  Diversity in Early Childhood Education

3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Meets the State Department of Social Services licensing requirements for DSS III, Program and Curriculum Development

This course examines biases regarding race, gender, culture, disability, class and age in order to prepare students to work within diverse classrooms and communities. Through this examination students gain knowledge of experiences and perspectives other than their own, therefore, increasing tolerance, respect for, and interaction among people from diverse populations. C-ID ECE 230, CSU

ECE-150  Topics in Child Development

1-3 units  P/NP
- Variable hours
- Note: TB clearance required for any laboratory work. Participation in Developmental Children's Center Laboratory School or approved off-campus mentor site from 3 to 6 hours per week is required for 2 or 3 units. One unit: lecture only. Two units: lecture plus six laboratory hours per week. Required of parents whose children are enrolled in Developmental Children's Center.

A supplemental course in child development to provide a study of current concepts and problems in child development and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

ECE-151  Topics in Cognitive Development

1-3 units  P/NP
- Variable hours
- Note: TB clearance required for any laboratory work. Participation in Developmental Children's Center Laboratory School or approved off-campus mentor site from 3 to 6 hours per week is required for 2 or 3 units. One unit: lecture only. Two units: lecture plus six laboratory hours per week. Three units: lecture plus six laboratory hours per week.

A supplemental course in cognitive development to provide a study of current concepts and problems in cognitive development and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

ECE-152  Topics in Physical Development

1-3 units  P/NP
- Variable hours
- Note: TB clearance required for any laboratory work. Participation in Developmental Children's Center Laboratory School or approved off-campus mentor site from 3 to 6 hours per week is required for 2 or 3 units. One unit: lecture only. Two units: lecture plus three laboratory hours per week. Three units: lecture plus six laboratory hours per week.

A supplemental course in physical development in the child through age six to provide a study of current concepts and problems in physical development and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

ECE-153  Topics in the Role of Play in Development

1-3 units  P/NP
- Variable hours
- Note: TB clearance required for any laboratory work. Participation in Developmental Children's Center Laboratory School or approved off-campus mentor site from 3 to 6 hours per week is required for 2 or 3 units. One unit: lecture only. Two units: lecture plus three laboratory hours per week. Three units: lecture plus six laboratory hours per week.

A supplemental course in the role of play in development to provide a study of current concepts and problems in play development and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

ECE-154  Topics in Personality Development

1-3 units  P/NP
- Variable hours
- Note: TB clearance required for any laboratory work. Participation in Developmental Children's Center Laboratory School or approved off-campus mentor site from 3 to 6 hours per week is required for 2 or 3 units. One unit: lecture only. Two units: lecture plus three laboratory hours per week. Three units: lecture plus six laboratory hours per week.

A supplemental course in personality development to provide a study of current concepts and problems in personality development and related subdivisions. Specific topics will be announced in the schedule of classes. CSU
ECE-155  Topics in Child Behavior
1-3 units  P/NP
• Variable hours
• Note: TB clearance required for any laboratory work.
  Participation in Developmental Children's Center
  Laboratory School or approved off-campus mentor site
  from 3 to 6 hours per week is required for 2 or 3 units.
  One unit: lecture only. Two units: lecture plus three
  laboratory hours per week. Three units: lecture plus six
  laboratory hours per week.
A supplemental course in child behavior to provide a study
of current concepts and problems in behavior and related
subdivisions. Specific topics will be announced in the sched-
ule of classes. CSU

ECE-220  Programs for the School Age Child
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course is an overview of the developmental tasks
and needs of the child between the ages of six and twelve covering
fundamentals of planning, implementing, and evaluating
programs for the school-aged child. Special consideration
will be given to working with schools, community, and parents. CSU

ECE-230  Developmentally Appropriate Practice for Infants and Toddlers
3 units  SC
• 54 hours lecture per term
• Recommended: ECE-124 and eligibility for ENGL-122 or equivalents
• Note: Meets the State Department of Social Services
  licensing requirement for DSS IV, Infant Care and
  Development
This course applies current theory and research to the care
and education of infants and toddlers in group settings. It examines essential policies, principles and practices that
lead to quality care and developmentally appropriate cur-
riculum for children birth to 36 months, including elements of responsive environments and collaboration with families. CSU

ECE-231  Infant and Toddler Development
3 units  SC
• 54 hours lecture per term
• Recommended: ECE-124, ECE-230 and eligibility for
  ENGL-122 or equivalents
This course studies the physical, cognitive, linguistic, social,
and emotional development and growth of infants and tod-
ddlers. Students will apply current research and developmen-
tal theory to infant and toddler behavior. Emphasis is placed
on the role of the family and relationships. CSU

ECE-237  Current Topics in Early Childhood Education
.5-3 units  SC
• Variable hours
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: Meets the State Department of Social Services
  licensing requirement for DSS III, Program and
  Curriculum Development, if taken for 3 units, and the
course is a curriculum course
A supplemental course in child development to provide a study
of current concepts and problems in the major theories of child development including their philosophical bases,
their techniques and their materials and related subdivi-
sions. Specific topics will be announced in the schedule of classes. CSU

ECE-240  Language and Literacy for the Young Child
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course is an introduction to children's literature, emergent literacy and the development of speech and
language during infancy and early childhood. Students will explore teaching techniques which promote language, literacy and literature for the young child. Approaches to reading books, storytelling, story writing, etc. will be introduced and practiced. CSU

ECE-241  Science and Mathematics for Early Childhood Education
3 units  SC
• 54 hours lecture per term
• Note: Meets the State Department of Social Services
  licensing requirement for DSS III, Program and
  Curriculum Development
This course explores how science, mathematics, the physical
and the natural world are integrated into early childhood
education curricula. Students will create science and math experiences, select appropriate materials, and learn specific scientific and mathematical techniques for working with young children. The course focuses on tapping into children's natural curiosity by utilizing observation, reasoning skills, inquiry and hands-on, playful experiences. CSU

ECE-242  Music for the Young Child
1 unit  SC
• 18 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: Meets the State Department of Social Services
  licensing requirement for DSS III, Program and
  Curriculum Development
This course is an exploration of media and techniques that
enable the teacher to plan, conduct, and evaluate music and
movement activities for the young child. Experiences in the integration of music, movement, and language as related
to conceptual and sensory motor development are covered. CSU
ECE-243  Creative Art for the Young Child  1 unit SC
• 18 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: Meets the State Department of Social Services licensing requirement for DSS III, Program and Curriculum Development

A study of the developmental stages of children's artistic expression. Includes an exploration of creative art activities along with developing and implementing a creative arts curriculum for the young child. CSU

ECE-244  Circle Time Activities  1 unit SC
• 18 hours lecture per term

This course is designed to present the value of circle or group time for young children. Written materials, demonstrations, lecture and discussions, and sharing of student experiences are utilized to teach practical and theoretical application of songs, stories, games, finger plays and other circle time activities. CSU

ECE-249  Observation and Assessment in the Classroom  4 units SC
• 54 hours lecture/54 hours laboratory by arrangement per term
• Prerequisite: ECE-124 or equivalent
• Co-requisite: ECE-125 or equivalent (may be taken previously)
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: TB clearance required for students to participate in laboratory work at DVC Children's Center or approved mentor site. Meets the State Department of Social Services licensing requirement for DSS III, Program and Curriculum Development.

This course focuses on the appropriate use of assessment and observation strategies to document development, growth, play and learning in early childhood education settings. Students will utilize practical classroom experiences to apply a variety of observation methodologies including, child portfolios, recording strategies, rating systems, and multiple assessment tools. Within the context of the DVC Children's Center or an approved mentor site, students will explore the connections between developmental theory and practical usage of reflective observation. C-ID ECE 210, CSU

ECE-250  Practicum in Early Childhood Education  4 units SC
• 36 hours lecture/108 hours laboratory by arrangement per term
• Prerequisite: ECE-123, ECE-124, ECE-125 and ECE-249 or equivalents
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: Required TB clearance for students participating in laboratory work. Meets the State Department of Social Services licensing requirement for DSS III, Program and Curriculum Development.

A supervised practicum study of developmentally appropriate early childhood teaching competencies. Students will utilize practical classroom experiences to make connections between theory and practice, develop professional behaviors, and build a comprehensive understanding of children and families. Child centered, play-oriented approaches to teaching, learning, and assessment, and knowledge of curriculum content areas will be emphasized. Student teachers design, implement and evaluate learning activities and environments. Focus is on reflective teaching and developing in-depth curriculum projects based on on-going observations of children. C-ID ECE 210, CSU

ECE-251  Administration I: Programs in Early Childhood Education  3 units SC
• 54 hours lecture per term
• Prerequisite: ECE-124 or equivalent
• Note: Meets the State Department of Social Services licensing requirement for DSS VI, Supervision and Administration

This course presents an introduction to the administration of early childhood programs (ECE). Topics include program types, budget, management, regulations, laws, development and implementation of policies and procedures. Administrative tools, philosophies, and techniques needed to organize, open, and operate an early care and education program will be examined. CSU

ECE-252  Administration II: Personnel and Leadership in ECE  3 units SC
• 54 hours lecture per term
• Recommended: ECE-251 and eligibility for ENGL-122 or equivalents
• Note: Meets the State Department of Social Services licensing requirement for DSS VI, Supervision and Administration

This course provides an overview of effective strategies for personnel management and leadership in early care and education settings. Focus is on the human relations aspects of successful administration. Topics include legal and ethical responsibilities, supervision techniques, professional development, and reflective practices for a diverse and inclusive early care and education program. CSU
ECE-253  **Adult Supervision and Mentoring in Early Childhood Classrooms**  
2 units  SC  
- 36 hours lecture per term  
- Recommended: ECE-124, 125, 130 and 250 or equivalents; eligibility for ENGL-122 or equivalent  
This course is a study of the methods and principles of supervising student teachers, assistant teachers, volunteers and other adults in early childhood education settings. Emphasis is on the roles and development of early childhood professionals as mentors and leaders. CSU  

ECE-269  **Children with Special Needs**  
3 units  SC  
- 54 hours lecture per term  
- Recommended: ECE-124 and eligibility for ENGL-122 or equivalents  
This course provides an introduction to the variations in development of children with special needs, as well as the resulting impact on families, and will focus on the years between birth through aged eight. An overview of historical and societal influences, laws relating to children with special needs, and the identification and referral process will also be discussed. CSU  

ECE-298  **Independent Study**  
.5-3 units  SC  
- Variable hours  
- Note: Submission of acceptable educational contract to department and Instruction Office is required.  
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU  

ECE-299  **Student Instructional Assistant**  
.5-3 units  SC  
- Variable hours  
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.  
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU  

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**ECONOMICS – ECON**  
Obed Vazquez, Dean  
Social Sciences Division  
Faculty Office Building, Room 136  

**Possible career opportunities**  
Economics is a basic component for a career in law, management, sales, banking, health care industry, utility industry, consulting, statistical analysis, finance, and government. Most career options require more than two years of college study.  

**Program-level student learning outcomes**  
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at [www.dvc.edu/slo](http://www.dvc.edu/slo).  

**Associate in arts in economics for transfer**  
Students completing the program will be able to...  
A. apply economic theories and economic reasoning to real life situations.  
B. use analytical techniques to measure economic conditions related to the individual, business firms, industries, and economic systems.  
C. explain the role that households, business organizations, governments, and the international sector, play in free markets, command economies, and mixed economies.  
D. evaluate the objectives, limitations, and mechanics of regulation, taxation, tariffs, quotas, and monetary and fiscal policies.  
E. use quantitative methodology to measure economic outcomes.  

The associate in arts in economics for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.  

In order to earn the degree, students must:  
- Complete 60 semester CSU-transferable units.  
- Complete the California State University-General Education-Breadth pattern (CSU GE-Breadth); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.  
- Complete a minimum of 18 semester units in the major  
- Obtain of a minimum grade point average (GPA) of 2.0.  
- Earn a grade of C or higher in all courses required for the major.
Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Students must complete each course used to meet a major requirement with a "C" grade or higher. Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate's degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

### Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON-220</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON-221</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>plus at least 3 units from:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS-240</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH-142</td>
<td>Elementary Statistics with Probability</td>
<td>4</td>
</tr>
<tr>
<td>plus at least 4 units from:</td>
<td></td>
<td></td>
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<tr>
<td>MATH-182</td>
<td>Calculus for Management, Life Science and Social Science I</td>
<td>4</td>
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<tr>
<td>MATH-192</td>
<td>Analytic Geometry and Calculus I</td>
<td>5</td>
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<tr>
<td>plus at least 3 units from:</td>
<td></td>
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<tr>
<td>BUS-294</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUSAC-186</td>
<td>Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAC-187</td>
<td>Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>MATH-181</td>
<td>Finite Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH-193</td>
<td>Analytic Geometry and Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>plus at least 3 units from any course above not already used or:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECON-101</td>
<td>Economics of Public Issues</td>
<td>3</td>
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<tr>
<td>ECON-200</td>
<td>Introduction to Economics</td>
<td>3</td>
</tr>
<tr>
<td>MATH-194</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH-292</td>
<td>Analytic Geometry and Calculus III</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total Minimum Required Units**: 19

### ECON-200  Introduction to Economics

3 units SC
- 54 hours lecture per term
- **Recommended**: Eligibility for ENGL-122 or equivalent

This course is a survey of the basic principles of economics, including both microeconomics and macroeconomics. Concepts such as market supply and demand, market structures, resource markets, business cycles, fiscal policy, the Federal Reserve System, and international trade are introduced. CSU, UC (credit limits may apply to UC - see counselor)

### ECON-220  Principles of Macroeconomics

3 units SC
- 54 hours lecture per term
- **Prerequisite**: MATH-120 or MATH-120SP or equivalent
- **Recommended**: Eligibility for ENGL-122 or equivalent

This course provides an introduction to fundamental economic principles that recur throughout economics such as scarcity, opportunity cost, marginal decision making and the gains from trade. Macroeconomics focuses on broad economic aggregates such as total output, employment, the price level and the rate of economic growth. The course also examines fiscal and monetary policies and institutions, and applies macroeconomic theories to current economic issues. C-ID ECON 202, CSU, UC

### ECON-221  Principles of Microeconomics

3 units SC
- 54 hours lecture per term
- **Prerequisite**: MATH-120 or MATH-120SP or equivalent
- **Recommended**: Eligibility for ENGL-122 or equivalent

Microeconomics focuses on the study of choices made by economic agents, namely, consumers, resource owners, firms, and government, and how these decisions affect the market for a particular good or service. Typical topics include a detailed study of the market mechanism, the elasticity properties of the demand and supply curves, how individuals make decisions about consumption and labor supply, how firms make decisions about how and how much to produce, and why some goods do not lend themselves to private production. The course also examines types of market structure and current economic issues. C-ID ECON 201, CSU, UC

### ECON-101  Economics of Public Issues

3 units SC
- 54 hours lecture per term
- **Recommended**: Eligibility for ENGL-122 or equivalent

This course examines economic aspects of selected current public issues such as price controls, crime, education, poverty, pollution, international trade, and taxes. It will analyze the role of economics as a social science in understanding causes of and policies for dealing with current public issues. CSU, UC (credit limits may apply to UC - see counselor)

### ECON-255  Topics in Economics

3.3-4 units SC
- **Variable hours**

A supplemental course in economics to provide a study of current concepts and problems in economics and related substantive areas. Specific topics will be announced in the schedule of classes. CSU
ECON-298  Independent Study
.5-3 units  SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

ECON-299  Student Instructional Assistant
.5-3 units  SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

EDUCATION – EDUC

Obed Vazquez, Dean
Social Sciences Division
Faculty Office Building, Room 136

Possible career opportunities
There are two types of credentials for teaching in the public schools in California. One type is the Multiple Subjects Credential for teachers in a self-contained classroom, which generally means teaching in grades K-6 or K-8. The other is the Single Subject Credential for teachers responsible for only one subject, which in general is preparation for teaching high school (grades 9-12). Both career options require a baccalaureate degree at a minimum.

Preparation for teaching may be useful for students who also wish to pursue careers in human resources, counseling, communication studies, recreation administration, social welfare, and corporate training.

Associate in arts in elementary teacher education for transfer

Students completing this program will be able to...
A. analyze models and methods of effective teaching, especially in relation to the needs of a diverse student body.
B. examine the physical, cognitive/language, social-emotional milestones in school age children.
C. understand and analyze how concepts of mathematics, English and language arts, social studies, visual and performing arts and sciences apply to teaching at an elementary level.

The associate in arts in elementary teacher education for transfer is an interdisciplinary program which meets state guidelines in order to prepare students to begin their path toward becoming elementary school teachers. Students majoring in elementary teacher education develop critical thinking, problem solving, and written and verbal communication skills. As elementary teacher education majors, students have learning opportunities that are relevant to many types of careers working with children and parents including special education, elementary education, and social work. This major provides early field work experience working with children in an elementary school.

The associate in arts in elementary teacher education for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major. The associate in arts in elementary teacher education for transfer is consistent with the mission of the community college to assist students in achieving a seamless transfer to the CSU system.

In order to earn the degree, students must:
• Complete 60 semester CSU-transferable units.
• Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
• Complete a minimum of 18 semester units in the major.
• Obtain of a minimum grade point average (GPA) of 2.0.
• Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system, or those students who do not intend to transfer.
Students must complete each course used to meet a major requirement with a “C” grade or higher. Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

<table>
<thead>
<tr>
<th>Major Requirements:</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOSC-102 Fundamental of Biological Science with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>COMM-120 Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>EDUC-120 Introduction to Teaching in Elementary Schools</td>
<td>3</td>
</tr>
<tr>
<td>ENGL-122 Freshman English: Composition and Reading</td>
<td>3</td>
</tr>
<tr>
<td>ENGL-123 Critical Thinking: Composition and Literature</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-135 World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOL-130 Earth Science</td>
<td>4</td>
</tr>
<tr>
<td>HIST-120 History of the United States before 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST-180 World History to 1500</td>
<td>3</td>
</tr>
<tr>
<td>MATH-125 Mathematical Concepts for Elementary School Teachers</td>
<td>3</td>
</tr>
<tr>
<td>PHYS-110 Elementary Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS-111 Physics Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>POLSC-121 Introduction to United States Government</td>
<td>3</td>
</tr>
</tbody>
</table>

at least 4 units from:

| Chemistry for Non-Science Majors | 4     |
| Introductory Chemistry           | 4     |

at least 3 units from:

| Persuasion and Critical Thinking | 3     |
| Critical Thinking: The Shaping of Meaning in Language | 3     |
| Critical Reasoning in History    | 3     |
| Logic and Critical Thinking      | 3     |
| Critical Thinking in Psychology  | 3     |
| Critical Thinking About Social and Cultural Issues | 3     |

plus at least 3 units from:

| Western Culture Dance History: 20th Century to Present | 3     |
| Introduction to Theater                                     | 3     |
| Music Appreciation                                          | 3     |

Total minimum required units: **52**

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**EDUC-120 Introduction to Teaching in Elementary Schools**

3 units LR

- 36 hours lecture/54 hours laboratory by arrangement per term
- Limitation on enrollment: Current TB clearance and background check required. A fee for service will be charged for the background check. See the schedule of classes for specific information.
- Recommended: ENGL-122 or equivalent
- Note: Credit by examination option available

This course introduces students to the concepts and issues related to teaching diverse learners in today's contemporary schools, pre-kindergarten through grade twelve. Topics include teaching as a profession and career, historical and philosophical foundations of the United States' education system, contemporary educational issues, California's content standards and frameworks, and teacher performance standards. In addition to lecture, this course requires structured fieldwork in public school elementary classrooms that represent California's diverse student population, and includes cooperation with at least one carefully selected and campus-approved certificated classroom teacher. C-ID EDUC 200, CSU, UC

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**ELECTRICAL/ELECTRONICS TECHNOLOGY – ELECT/ELTRN**

Tish Young, Dean  
Physical Sciences and Engineering Division  
Physical Sciences Building, Room 263

### Possible career opportunities

The types of jobs and careers involving electrical/electronics include: electrical, medical, industrial, and commercial electronic programmable logic controller systems; computers; consumer products; radio and television; instrumentation; communications; automotive and others.

### Program-level student learning outcomes

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at [www.dvc.edu/slo](http://www.dvc.edu/slo).
Electrical/electronics technology

Associate in science degree

Electrical/electronics technology

Students completing the program will be able to...

A. identify common electrical circuit components and their use.
B. solve AC and DC Circuits for Voltage, Current, Resistance, Power, and other parameters.
C. operate and understand common laboratory instruments used in the analysis, construction, and troubleshooting of AC and DC circuits.
D. apply specific sections of the national electrical code to electrical systems.

This program prepares students for jobs installing, repairing, maintaining and servicing electrical and electronics equipment. Electrical/electronics jobs are found in the fields of electrical, medical, industrial, commercial systems, programmable logic controller systems, automotive, communications and others. The following courses are part of the Electricians Trainee Program and approved by the Division of Apprenticeship Standards: ELECT-120, 121, 130, 220, 230, 266, 267, 271, ELTRN-210 and CNT-103.

Selected courses may meet some of the lower division requirements for bachelor of science programs in engineering technology and industrial technology at certain California State University campuses and private technical colleges. Consult with electronics department faculty and college counselors for more information.

To earn an associate in science with a major in electrical/electronics technology, students must complete each course used to meet a major requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the certificate.

“C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the certificate.

Certificate of achievement

Electrical/electronics technology

Students completing the program will be able to...

A. identify common electrical circuit components and their use.
B. solve AC and DC Circuits for Voltage, Current, Resistance, Power, and other parameters.
C. operate and understand common laboratory instruments used in the analysis, construction, and troubleshooting of AC and DC circuits.
D. apply specific sections of the national electrical code to electrical systems.

This program prepares students for jobs installing, repairing, maintaining and servicing electrical and electronics equipment. Electrical/electronics jobs are found in the fields of electrical, medical, industrial, commercial systems, programmable logic controller systems, automotive, communications and others. The following courses are part of the Electricians Trainee Program and approved by the Division of Apprenticeship Standards: ELECT-120, 121, 130, 220, 230, 266, 267, 271, ELTRN-210 and CNT-103.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the certificate.

required courses: units

plus at least 3 units from any course not used above, or:

CART-103 Voice, Video and Network Cabling ................... 2
CONST-110 Occupational Safety ................................ 2
ELECT-267 Electrical Codes: Articles 400-830 ............. 3
ELTRN-107 Introduction to Robotics .......................... 2
ELTRN-116 Electronics I ......................................... 3

total minimum required units 26

required courses: units

plus at least 4 units from:

ELECT-120 Direct Current Circuits ............................ 4
ELTRN-120 Direct Current Circuits ............................ 4

plus at least 4 units from:

ELECT-121 Alternating Current Circuits ..................... 4
ELTRN-121 Alternating Current Circuits ..................... 4

plus at least 12 units from:

ELECT-130 Motors and Motor Controllers ................... 4
ELECT-220 Circuit Diagnosis and Analysis: Troubleshooting 2
ELECT-230 Electro-Mechanical Equipment ................... 2
ELECT-271 Programmable Logic Controllers ............... 4
ELTRN-210 Linear Circuits ..................................... 4

plus at least 3 units from any course not used above, or:

CART-103 Voice, Video and Network Cabling ............... 2
CONST-110 Occupational Safety .............................. 2
ELECT-267 Electrical Codes: Articles 400-830 ............ 3
ELTRN-107 Introduction to Robotics ........................ 2
ELTRN-116 Electronics I ....................................... 3

total minimum required units 26

required courses: units

ELTRN-266 Electrical Codes: Articles 90-398 ............. 3

plus at least 4 units from:

ELECT-120 Direct Current Circuits ............................ 4
ELTRN-120 Direct Current Circuits ............................ 4

plus at least 4 units from:

ELECT-121 Alternating Current Circuits ..................... 4
ELTRN-121 Alternating Current Circuits ..................... 4

plus at least 12 units from:

ELECT-130 Motors and Motor Controllers ................... 4
ELECT-220 Circuit Diagnosis and Analysis: Troubleshooting 2
ELECT-230 Electro-Mechanical Equipment ................... 2
ELECT-271 Programmable Logic Controllers ............... 4
ELTRN-210 Linear Circuits ..................................... 4

plus at least 3 units from any course not used above, or:

CART-103 Voice, Video and Network Cabling ............... 2
CONST-110 Occupational Safety .............................. 2
ELECT-267 Electrical Codes: Articles 400-830 ............ 3
ELTRN-107 Introduction to Robotics ........................ 2
ELTRN-116 Electronics I ....................................... 3

total minimum required units 26
Certificate of accomplishment

Electrical/electronics technology

Students completing the program will be able to...

A. identify common electrical circuit components and their use.

B. solve AC and DC Circuits for Voltage, Current, Resistance, Power, and other parameters.

C. operate and demonstrate understanding of common laboratory instruments used in the analysis, construction, and troubleshooting of AC and DC circuits.

D. apply specific sections of the national electrical code to electrical systems.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the certificate.

Required courses:

**ELECT-266**  
**Electrical Codes: Articles 90-398**  
3 units

**plus at least 4 units from:**

**ELECT-120**  
**Direct Current Circuits**  
4 units

**ELTRN-120**  
**Direct Current Circuits**  
4 units

**plus at least 4 units from:**

**ELECT-121**  
**Alternating Current Circuits**  
4 units

**ELTRN-121**  
**Alternating Current Circuits**  
4 units

Total minimum required units: 11 units

**ELECT-110**  
**Introduction to Electricity**  
2 units  SC

- 27 hours lecture/27 hours laboratory per term
- Recommended: MATH-090 or MATH-090E or MATH-090SP or equivalent
- Note: This course is not a requirement for the electronics/electricity sequence.

This is an introductory course in electrical concepts, components, systems, and equipment. Ohm’s and Kirchoff’s laws are used to calculate and measure resistance, voltage, amperage, and power in circuits. AC components, such as coils, transformers, capacitors, and motors are also covered. Students will build and measure circuits and everyday electrical devices using both digital and analog equipment. Emphasis is placed on practical aspects of circuits and components. CSU

**ELECT-120**  
**Direct Current Circuits**  
4 units  LR
- 54 hours lecture/54 hours laboratory per term
- Recommended: ELECT-120 or equivalent
- Note: This course is approved by the Division of Apprenticeship Standards in the electrician trainee program.

This course introduces scientific principles and hands-on applications of direct current (DC) electricity, focusing on measurement and diagnosis of series, parallel, and combination circuits. These fundamental knowledge and skills are necessary for those planning careers and/or further study in electronics, electricity, or related fields, such as heating, ventilation, and air conditioning (HVAC), building systems, industrial maintenance, electrical/electronics (EE) technology, and energy systems. CSU

**ELECT-121**  
**Alternating Current Circuits**  
4 units  LR
- 54 hours lecture/54 hours laboratory per term
- Recommended: ELECT-120 or equivalent
- Note: This course is approved by the Division of Apprenticeship Standards in the electrician trainee program.

This course is an in-depth study of the theory and application of alternating current (AC) including series, parallel, and combination resistive/inductive (RL), resistive/capacitive (RC), and resistive/inductive/capacitative (RLC) circuits. Students will construct, measure, and analyze circuits using computer simulation and actual components with signal generators and oscilloscopes. CSU

**ELECT-130**  
**Motors and Motor Controllers**  
4 units  SC
- 54 hours lecture/54 hours laboratory per term
- Recommended: ELECT-120 or equivalent

This course introduces the function, operation and characteristics of various types of direct current, alternating current, single phase and three phase motors. The course will explore the basic principles and practices of electric motor control including electro-mechanical and solid state digital devices, ladder logic, standard circuits, starters, transformers, relays, timers, and other devices. CSU

**ELECT-150**  
**Topics in Electricity**  
.3-4 units  SC
- Variable hours

A supplemental course in electricity designed to provide a study of current concepts and problems in electricity. Specific topics will be announced in the schedule of classes. CSU
ELECT-220 Circuit Diagnosis and Analysis: Troubleshooting
2 units SC
- 27 hours lecture/27 hours laboratory per term
- Prerequisite: ELECT-120 and ELECT-121 or equivalents
This course presents troubleshooting of electro-mechanical systems and sub-systems for various machines and equipment used in residences, commercial buildings, and industrial complexes. Emphasis is placed on developing skill in reading and understanding diagrams in conjunction with proper troubleshooting procedures. Several types of diagrams will be examined during this course including Block, Pictorial, One-line, Wiring, Pictorial, Terminal, Schematic, Esterline, and more. CSU

ELECT-230 Electro-Mechanical Equipment
2 units SC
- 27 hours lecture/27 hours laboratory per term
- Prerequisite: ELECT-120 and ELECT-121 or equivalents
This course presents the identification, installation, operation, and maintenance of residential/commercial/industrial systems and components. The focus is on electrical components and systems, which are related to interface devices such as mechanical, hydraulic, and pneumatic systems and their controllers. CSU

ELECT-266 Electrical Codes: Articles 90-398
3 units SC
- 54 hours lecture per term
- Note: Same as CONST-266. Students may petition to repeat when code changes. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
This course covers the interpretation of the National Electrical Code (NEC) for general requirements, wiring and protection, wiring methods and materials (articles 90-398). Safety installation practices will be presented.

ELECT-267 Electrical Codes: Article 400-830
3 units SC
- 54 hours lecture per term
- Note: Same as CONST-267. Students may petition to repeat when code changes. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
This course covers the interpretation of the National Electrical Code (NEC) for equipment for general use, special occupancies and special equipment (articles 400-830). Safety installation practices will be presented.

ELECT-271 Programmable Logic Controllers
4 units LR
- 54 hours lecture/54 hours laboratory per term
- Recommended: ELECT-120 or equivalent
This course will cover programmable logic controller equipment, hardware, and programming. The topics include system descriptions, internal and input/output operations, installation and testing, troubleshooting and maintenance, ladder diagrams, programming of counters, timers, and inputs/outputs, and other programming commands. CSU

ELECT-299 Student Instructional Assistant
.5-.3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

ELTRN-107 Introduction to Robotics
2 units SC
- 27 hours lecture/27 hours laboratory per term
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree. Credit by examination option available.
This course introduces the science and technology involved in robotic systems. Beyond basic science, topics include input and output devices and programmable controllers and programming coding. Working independently or in teams, students will design and build circuits and kinematic structures that sense and interact with their environment. Using simple programming languages, students will work with a variety of microprocessors, including Arduino, Parallax, VEX, Lego, and others. This course prepares students for more advanced studies in robotics and related technologies, such as those used in building controls systems and industrial applications. CSU

ELTRN-116 Electronics I
3 units SC
- 45 hours lecture/27 hours laboratory per term
- Note: Credit by examination option available.
This course is an overview of electronic circuit fundamentals and devices. Students will construct, analyze, verify, and troubleshoot common electronic circuits using appropriate techniques and test equipment. CSU
ELTRN-120  Direct Current Circuits
4 units  LR
• 54 hours lecture/54 hours laboratory per term
Basic direct current (DC) theory covering OHM’s Law, series circuits, parallel circuits, series-parallel circuits, basic residential wiring and ladder logic. Also includes related laboratory experience, including use of software to simulate electrical circuits. CSU

ELTRN-121  Alternating Current Circuits
4 units  LR
• 54 hours lecture/54 hours laboratory per term
• Recommended: ELTRN-120 or equivalent
An in-depth study of alternating current (AC) circuits involving capacitance and inductance. Topics include RL, RC, RLC and resonant circuits. The course covers 3-phase circuits, computer-simulated circuits, and related laboratory experience. CSU

ELTRN-150  Topics in Electronics
.3-4 units  SC
• Variable hours
A supplemental course in electronics to provide a study of current concepts and problems in electronics and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

ELTRN-210  Linear Circuits
4 units  LR
• 54 hours lecture/54 hours laboratory per term
• Recommended: ELECT-121 or equivalent
• Note: This course is part of the Electrician Trainee Program approved by the Division of Apprenticeship Standards
• Formerly ELTRN-102B
A study of operational amplifiers, timers, phase-locked loops, and other active devices. Includes analysis and design of basic circuits such as active filters and analog communication circuits. Also includes related laboratory experience. CSU

ELTRN-299  Student Instructional Assistant
.5-3 units  SC
• Variable hours
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Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

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• Variable hours
A supplemental course in electronics to provide a study of current concepts and problems in electronics and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

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• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
Energy systems

plus at least 4 units from:
ELECT-120 Direct Current Circuits .................. 4
ELTRN-120 Direct Current Circuits .................. 4

plus at least 12 units from:
ARCHI-207 Environmental Control Systems ............ 3
CONST-110 Occupational Safety ........................ 2
CONST-183 Title 24: Energy Conservation Codes ........ 3
ELECT-121 Alternating Current Circuits .............. 4
ELECT-266 Electrical Codes: Articles 90-398 .......... 3
ELECT-267 Electrical Codes: Articles 400-830 ........ 3
ENSYS-260 Solar Photovoltaic and Thermal Installation Techniques ........................................... 2

total minimum required units 26

Certificate of accomplishment

Energy systems

Students completing the program will be able to...

A. identify, measure, and analyze the major energy uses in typical businesses operations, focusing beyond the building and into processes.
B. demonstrate the electrical and energy systems skills to successfully interact with builders, architects, engineers, and constructors and advise on building and systems energy use.
C. design medium complexity solar photovoltaic or other energy system for medium size commercial buildings and processes.

This program provides students with a broad view of energy and energy systems and specific skills for those planning on entering the field of installing, servicing/repairing and maintaining renewable/sustainable energy systems. This includes wind energy, biodiesel and biofuels, biomass, fuel cells, hydrogen, and other technologies.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the certificate.

required courses:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENSYS-120</td>
<td>Introduction to Energy Systems</td>
<td>3</td>
</tr>
<tr>
<td>ENSYS-125</td>
<td>Building Envelope and Systems</td>
<td>3</td>
</tr>
<tr>
<td>ENSYS-130</td>
<td>Photovoltaic Systems Design and Installation</td>
<td>2</td>
</tr>
<tr>
<td>ENSYS-230</td>
<td>Advanced Photovoltaic Systems</td>
<td>2</td>
</tr>
</tbody>
</table>

plus at least 4 units from:
ELECT-120 Direct Current Circuits .................. 4
ELTRN-120 Direct Current Circuits .................. 4

total minimum required units 14

ENSYS-120 Introduction to Energy Systems

3 units SC

• 45 hours lecture/27 hours laboratory per term

This course will cover present day energy systems and an in-depth analysis of the design and installation of alternate energy systems including solar water heating systems, solar electrical systems, wind electrical systems, wind mechanical systems, small hydro-electrical systems and unique conservation methods. Additional topics include geothermal energy, fuel cells, and biomass systems as well as applications of alternate energy in transportation, industrial, commercial, and residential systems. CSU
ENSYS-125 Building Envelope and Systems
3 units SC
• 45 hours lecture/27 hours laboratory per term
• Recommended: ENSYS-120 or equivalent and MATH-090 or MATH-090E or MATH-090SP or equivalent

This course provides an introduction to buildings and building systems, including the envelope and major electromechanical equipment used in the building. Students will gain knowledge of and experience with various strategies and tools used to measure and analyze building energy use such as infrared thermography, duct and envelope leak testers, light and sound meters, energy analysis programs. Mitigation strategies to save energy and improve occupancy health are emphasized. CSU

ENSYS-130 Photovoltaic Systems Design and Installation
2 units SC
• 36 hours lecture/18 hours laboratory per term

Students will learn how to do solar site evaluations, electrical load calculations, solar system size calculations, and installation techniques for grid-tie and off-the-grid photovoltaic systems. Students will learn how to design and install their own solar system and or obtain skills for employment. This course is approved by the North American Board of Certified Energy Practitioners (NABCEP) and the students can take the optional Photovoltaic Systems Entry Level certification exam as part of the course. CSU

ENSYS-150 Topics in Energy Systems
.3-4 units SC
• Variable hours

A supplemental course in energy systems that provides a study of current concepts and practices in energy systems and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

ENSYS-230 Advanced Photovoltaic Systems
2 units LR
• 27 hours lecture/27 hours laboratory per term
• Recommended: ENSYS-130 and ELECT-122 or equivalents

This course will cover the National Electrical Code (NEC) specifics concerning photovoltaic installations. The topics include code compliant wiring of modules, inverters, charge controllers, batteries, grounding techniques and related topics. Additional topics include the design and installation of large commercial photovoltaic systems. CSU

ENSYS-260 Solar Photovoltaic and Thermal Installation Techniques
2 units LR
• 27 hours lecture/27 hours laboratory per term
• Recommended: ENSYS-130 and ENSYS-140 or equivalents
• Note: This course will include activities working with high voltages, hot liquids, power tools, and working on elevated surfaces. Class activities include climbing ladders, lifting up to 50 pounds and working in elevated spaces, in crawl spaces and tight areas.

This course will cover the techniques, tools, materials used in the installation of solar photovoltaic and solar thermal systems. This course will also cover the OSHA safety requirements for ladder, roof, fall-protection systems, scissor lifts and forklifts. CSU

ENSYS-299 Student Instructional Assistant
.5-3 units SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

ENGINEERING – ENGIN

Tish Young, Dean
Physical Sciences and Engineering Division
Physical Sciences Building, Room 263

Possible career opportunities
The engineering transfer program prepares students to enter four-year engineering schools as juniors. Upon completion of the B.S., students can become electrical, civil, mechanical, chemical, materials, aerospace or industrial engineers.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.
Engineering

Associate in science degree
Civil engineering

Students completing the program will be able to...

A. apply the skills and knowledge acquired to analyze issues, solve problems, and critically evaluate a proposal or a process.

B. use appropriate quantitative tools to answer scientific questions, represent data, and document scientific findings.

C. demonstrate effective communication with fellow team members, the public, and members of the scientific community, using written, oral, and visual communication methods.

D. safely and appropriately use standard laboratory or field equipment to make precise and reliable measurements.

E. Students completing this program will be able to analyze the internal forces and moments in statically determinate structures.

The associate in science degree in civil engineering (ASCE) is offered to prepare students to transfer to a four-year institution in the civil engineering major.

The graduates of this program will be able to apply the basic principles of civil engineering to a variety of technical projects related to the design, construction, managing and sustaining of a wide range of developments such as structural systems, buildings, highways, waterways, lifelines, and infrastructures.

The DVC ASCE degree is intended for transfer. Degree requirements at four-year programs differ from institution to institution, so students wishing to transfer to a particular four-year program must consult with a counselor regarding specific major requirements of a particular university program. Additionally, students are advised that other courses in math, physics and chemistry may be required and that engineering courses have science and math prerequisites. It is recommended that the students contact the counseling office for advisement regarding appropriate sequencing.

Finally, the ASCE is a high-unit major; students are advised to meet with a counselor to determine appropriate general education courses to complete their degree requirements.

To earn an ASCE degree students must complete each course used to meet a major requirement with a “C” grade or higher and complete general education requirements as listed in the catalog. Major requirements may be taken only on a “for major” basis. Certain courses may satisfy both major and general education requirements; however the units are only counted once.

major requirements: units
CHEM-120* General College Chemistry I ................. 5
ENGIN-110 Introduction to Engineering ............... 3
ENGIN-120 Engineering Drawing ..................... 3
ENGIN-230* Introduction to Circuits and Devices ........ 4
ENGIN-240* Properties of Engineering Materials ....... 4
ENGIN-255* Statics ........................................ 3
MATH-192* Analytic Geometry and Calculus I .......... 5
MATH-193* Analytic Geometry and Calculus II ......... 5
MATH-292* Analytic Geometry and Calculus III ....... 5
MATH-294* Differential Equations .................... 5
PHYS-130* Physics for Engineers and Scientists A: Mechanics and Wave Motion .......... 4
PHYS-230* Physics for Engineers and Scientists B: Heat and Electro-magnetism .......... 4

plus at least 3 units from:
ENGIN-135 Programming for Scientists and Engineers .......... 4
ENGIN-135* Computer Programming for Engineers Using MATLAB .......... 4
ENGIN-140* Plane Surveying ..................... 4
ENGIN-257* Statics and Strength of Materials .......... 3

total minimum required units 53

*These courses have prerequisites. See a counselor for program sequence.

Associate in science degree
Electrical engineering and computer engineering

Students completing the program will be able to...

A. apply analysis tools and computer tools in problem solving.

B. identify interdisciplinary aspects of engineering projects.

C. apply software engineering principles and procedures.

D. do computer algorithm development using C and C++ techniques.

E. understand the operation and control of electrical measuring equipment.

F. use computer programming skills to develop software for automation, decision making and control of equipment.

G. develop test software for evaluation of digital circuits.

H. analyze the operation of small scale digital and analog circuits.

I. design simple operational amplifier circuits.

J. demonstrate knowledge of magnetism and its applications in the design of transformers and actuators.

K. assemble and test digital and analog circuits from circuit diagrams.

The associate degree program in electrical engineering and computer engineering (EECE) prepares the students for a career in the EECE field or to transfer to a four-year degree program. Graduates entering the workforce will be able to perform the tasks typically expected of an assistant engineer. Students who intend to transfer are advised to select general education Option 2 (IGETC) or Option 3 (CSU GE). General education option 1 (DVC general education) is appropriate for students who do not intend to transfer.
Most core requirement courses have math and science prerequisites. Students must see a counselor for planning appropriate coursework sequence.

To earn an associate degree in electrical engineering and computer engineering, students must complete the core requirements with a "C" grade or higher. Students must also complete general education requirements as listed in the catalog. Certain courses may satisfy both a major and general education requirement; however the units are only counted once.

**major requirements:**

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<thead>
<tr>
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<tbody>
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<td>CHEM-120*</td>
<td>General College Chemistry I</td>
<td>5</td>
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<tr>
<td>COMSC-165*</td>
<td>Advanced Programming with C and C++</td>
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<tr>
<td>COMSC-210*</td>
<td>Program Design and Data</td>
<td>4</td>
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<tr>
<td>ENGIN-110</td>
<td>Introduction to Engineering</td>
<td>3</td>
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<tr>
<td>ENGIN-230*</td>
<td>Introduction to Circuits and Devices</td>
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<td>MATH-192*</td>
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<tr>
<td>MATH-193*</td>
<td>Analytic Geometry and Calculus II</td>
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<td>MATH-292*</td>
<td>Analytic Geometry and Calculus III</td>
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<td>MATH-294*</td>
<td>Differential Equations</td>
<td>5</td>
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<tr>
<td>PHYS-130*</td>
<td>Physics for Engineers and Scientists A:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mechanics and Wave Motion</td>
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<td>PHYS-231*</td>
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<td></td>
<td>Optics and Modern Physics</td>
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<td></td>
<td><strong>total minimum required units</strong></td>
<td><strong>55</strong></td>
</tr>
</tbody>
</table>

*Certain courses required for this degree have prerequisite coursework that could add additional units.

**Associate in science degree**

**Mechanical engineering**

Students completing the program will be able to...

A. apply the skills and knowledge acquired to analyze issues, solve problems, and critically evaluate a proposal or a process.

B. use appropriate quantitative tools to answer scientific questions, represent data, and document scientific findings.

C. demonstrate effective communication with fellow team members, the public, and members of the scientific community, using written, oral, and visual communication methods.

D. safely and appropriately use standard laboratory or field equipment to make precise and reliable measurements.

The associate in science degree in mechanical engineering (ASME) is designed to prepare mechanical engineering students for transfer to a four-year institution. This program enables graduates to apply basic engineering principles and technical skills in support of engineers engaged in the design and development phases of a wide variety of projects involving mechanical systems.

The DVC ASME degree is intended for transfer. Degree requirements at four-year programs differ from institution to institution, so students wishing to transfer to a particular four-year program must consult with a counselor regarding specific major requirements of a particular university program. Additionally, students are advised that other courses in math, physics and chemistry may be required and that engineering courses have science and math prerequisites.

It is recommended that the students contact the counseling office for advisement regarding appropriate sequencing.

Finally, the ASME is a high-unit major; students are advised to meet with a counselor to determine appropriate general education courses to complete their degree requirements.

To earn an ASME degree students must complete each required course for the major with a "C" grade or higher and complete all the requirements as listed in the catalog. Major requirements may be taken only on a "for grade" basis.

Certain courses may satisfy both major and general education requirements; however the units are only counted once.

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<tr>
<td>ENGIN-120</td>
<td>Engineering Drawing</td>
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<td>ENGIN-230*</td>
<td>Introduction to Circuits and Devices</td>
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<td>ENGIN-240*</td>
<td>Properties of Engineering Materials</td>
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<td>ENGIN-255*</td>
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<tr>
<td>PHYS-230*</td>
<td>Physics for Engineers and Scientists B:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heat and Electro-Magnetism</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>total minimum required units</strong></td>
<td><strong>53</strong></td>
</tr>
</tbody>
</table>

*These courses have prerequisites. See counselor for program sequence.
### ENGIN-110 Introduction to Engineering
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Credit by examination option available.

This course is an introduction to different engineering disciplines and careers, the role of an engineer in society, engineering ethics, the engineering approach to problem-solving, engineering design process and project development, engineering analysis, concurrent engineering, and application of computers in engineering including design and presentation tools. The emphasis is on hands-on creative problem-solving, teamwork, and effective communication. Students will develop design, analysis, and computer skills through work on projects drawn from various engineering majors. CSU, UC

### ENGIN-120 Engineering Drawing
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: MATH-114 and ENGIN-119 or equivalents

This course is an introduction to orthographic, oblique and perspective projections. Topics include relationships of points, lines and planes: auxiliary views, dimensioning, tolerancing, threads and fasteners. Students will be introduced to solid modeling with computer-aided design (CAD) software and the use of computers to produce engineering drawings as well as design and graphics as a form of communication in the engineering field. CSU, UC

### ENGIN-121 Engineering Drawing/Descriptive Geometry
3 units  LR
- 36 hours lecture/72 hours laboratory per term
- Recommended: ENGIN-120 or equivalent and MATH-121 or equivalent (may be taken concurrently)

Space relationships of points, lines, and surfaces; double auxiliaries, curved and warped surfaces; intersections, developments, vector analysis, introduction to three-dimensional CAD systems and solid modeling to solve descriptive geometry problems, engineering applications, graphical mathematics. CSU, UC

### ENGIN-130 Energy, Society, and the Environment
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 and MATH-090 or equivalents

An introduction to the sources, uses, economics, and environmental impacts of energy in contemporary society. The role of non-renewable and renewable energy systems and technologies in creating and maintaining sustainable energy systems is emphasized. CSU, UC

### ENGIN-131 Technology and Society
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course will explore the interrelationships between technology and the social sciences. Specifically, the course will investigate the societal factors that impact technology (historical, political, economic, ethical and environmental), and the ways in which technology affects society (language, art, music, psychology and sociology). This course is appropriate for students in both technical and non-technical majors. CSU, UC

### ENGIN-135 Programming for Scientists and Engineers
4 units  LR
- 54 hours lecture/54 hours laboratory per term
- Recommended: MATH-192 and eligibility for ENGL-122 or equivalents

This course provides an introduction to programming in C/ C++ for engineers and scientists. Topics include flowcharts, algorithm design principles, algebraic operations, decision making, loops, records, data structures, file input output operations and linked lists. Students will also learn the programming principles of numerical methods in science and engineering. CSU, UC

### ENGIN-136 Computer Programming for Engineers Using MATLAB
4 units  LR
- 54 hours lecture/54 hours laboratory per term
- Prerequisite: MATH-192 or equivalent
- Recommended: MATH-193 or equivalent (may be taken concurrently)

The methods of problem solving and data visualization in engineering and science using the MATLAB programming language will be introduced. Topics include numerical integration and differentiation, solution of systems of equations, regression, roots of equations and solution of differential equations. Programming with functions, local and global variables, file input and output, data formatting, induction, iteration, recursion and elements of object oriented programming will also be covered. C-ID ENGIN 220, CSU, UC

### ENGIN-140 Plane Surveying
4 units  SC
- 54 hours lecture/54 hours laboratory per term
- Prerequisite: MATH-121 or equivalent
- Note: Same as CONST-116

This course covers the principles and practices of surveying including measurement of distances, directions and elevations; measuring standards; introduction to electronic measurements and metric units; calibration, systematic and random-error analysis; traverse calculations; use and care of surveying instruments including tapes, transits, and levels; GPS measurements; map reading; horizontal and vertical curves and mapping. CSU, UC
ENGIN-150  Topics in Engineering  
.3-4 units  SC  
• Variable hours  
A supplemental course in engineering designed to provide a study of the current concepts and problems in engineering. Specific topics will be announced in the schedule of classes. CSU

ENGIN-210  Thermodynamics  
3 units  LR  
• 54 hours lecture/18 hours laboratory per term  
• Prerequisite: CHEM-120 and PHYS-230 or equivalents  
This course introduces the fundamentals of energy storage, thermophysical properties of liquids and gases, and the basic principles of thermodynamics. The course focuses on application of the concepts to various areas of engineering related to energy conversion and air conditioning. The use of computing tools that facilitate problem solving, design analysis, and parametric studies in thermodynamics will be integrated throughout the course. CSU, UC

ENGIN-230  Introduction to Circuits and Devices  
4 units  LR  
• 54 hours lecture/54 hours laboratory per term  
• Prerequisite: MATH-193 or equivalent and PHYS-230 or equivalent  
• Recommended: Eligibility for ENGL-122 or equivalent  
The course covers the subjects of electrical quantities, Ohm's law, Kirchoff's network theorems, AC and DC circuit analysis, transient and steady state response of circuits, digital circuits, solid state devices, magnetism and magnetic circuits. CSU, UC

ENGIN-240  Properties of Engineering Materials  
4 units  LR  
• 54 hours lecture/72 hours laboratory per term  
• Prerequisite: CHEM-120 and PHYS-130 or equivalents  
This course is a study of properties of engineering materials as related to their atomic, microscopic, and macroscopic structures. The application of the basic principles of physics and chemistry to the engineering properties of materials will be covered. Special emphasis will be devoted to the relation between microstructure and the mechanical properties of metals, concrete, polymers, and ceramics, and the electrical properties of semiconducting materials. C-ID ENGR 140B, CSU, UC

ENGIN-255  Statics  
3 units  LR  
• 54 hours lecture per term  
• Prerequisite: PHYS-130 or equivalent and MATH-193 or equivalent  
• Recommended: ENGIN-135 or ENGIN-136 or equivalent and eligibility for ENGL-122 or equivalent  
This course is a study of the effects of concentrated and distributed forces on the equilibrium of rigid bodies, structures, beams, flexible cables and rigid statics. The application of the method of sections and free body diagrams to solve truss problems will be covered. Wedges, screws, bearings, brakes and other problems involving friction will be examined. Virtual work and potential energy methods in the determination of equilibrium conditions in machines and structures will also be discussed. CSU, UC

ENGIN-257  Statics and Strength of Materials  
3 units  LR  
• 54 hours lecture per term  
• Prerequisite: PHYS-130 and MATH-193 or equivalents  
• Recommended: MATH-194 or equivalent  
This course is a study of mechanics and strength of materials, including equilibrium of particles and rigid bodies, analysis of truss and frame structures, concepts of stress and strain, linear elastic materials, axially-loaded structural elements, bending and torsion in circular and hollow shafts. Deflection of beams, buckling of columns and energy methods are also discussed. CSU, UC

ENGIN-298  Independent Study  
.5-3 units  SC  
• Variable hours  
• Note: Submission of acceptable educational contract to department and Instruction Office is required.  
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

ENGIN-299  Student Instructional Assistant  
.5-3 units  SC  
• Variable hours  
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.  
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
ENGINEERING TECHNOLOGY - ENGTC

Tish Young, Dean
Physical Sciences and Engineering Division
Physical Sciences Building, Room 263

Possible career opportunities
Career options in engineering technology include civil engineering technicians, surveying and mapping technicians (cartography), architectural and civil drafters, and mechanical engineering technicians. Engineering technicians may work as computer-aided design drafters, engineering aides, land surveyors, field assistants, planning technicians and technical sales people.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Civil design drafting technology

Students completing the program will be able to...
A. use technical drafting principles to develop technical drawings.
B. interpret construction blueprints.
C. use geometric construction and descriptive geometry to solve geometric problems.
D. create 2-dimensional and 3-dimensional computer aided drawings (CAD).
E. interpret global positioning data.
F. measure land forms using ground surveying equipment.
G. apply trigonometry to math problems.
H. apply the basic laws of physics to everyday situations.

The associate in science degree in civil design drafting technology provides students with the technical and analytical skills needed for employment in the field of civil engineering drafting. Through both academic and laboratory study students gain the practical skills needed for entry into the job market. For example, civil drafters may work on plans for major construction projects such as dams, roads, bridges, and sewage systems; or prepare, interpret and revise topographic and/or relief maps using computer-aided-drafting (CAD).

To earn the degree, students must complete each course used to meet a major requirement with a “C” grade or higher and complete general education requirements as listed in the catalog. Students who wish to transfer should consult with program faculty and college counselors to insure that the requirements for transfer to appropriate institutions are met. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

major requirements:

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<th>Units</th>
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<tr>
<td>CONST-114</td>
<td>Blueprint Reading</td>
<td>3</td>
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<tr>
<td>ENGIN-121</td>
<td>Engineering Drawing/Descriptive Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH-121</td>
<td>Plane Trigonometry</td>
<td>3</td>
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<tr>
<td>PHYS-110</td>
<td>Elementary Physics</td>
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plus at least 3 units from:

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</thead>
<tbody>
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<td>ARCHI-119</td>
<td>Introduction to Technical Drawing</td>
<td>3</td>
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<tr>
<td>ENGT-119</td>
<td>Introduction to Technical Drawing</td>
<td>3</td>
</tr>
</tbody>
</table>

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<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ARCHI-126</td>
<td>Computer Aided Design and Drafting - AutoCAD</td>
<td>3</td>
</tr>
<tr>
<td>ENGTC-126</td>
<td>Computer Aided Design and Drafting - AutoCAD</td>
<td>3</td>
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</table>

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</thead>
<tbody>
<tr>
<td>ENGTC-226</td>
<td>Computer Aided Drafting Design, Advanced Concepts - AutoCAD</td>
<td>3</td>
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</tbody>
</table>

plus at least 6 units from:

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>ARCHI-135</td>
<td>Digital Tools for Design</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI-136</td>
<td>Digital Tools for Architecture</td>
<td>3</td>
</tr>
<tr>
<td>CONST-116</td>
<td>Plane Surveying</td>
<td>4</td>
</tr>
<tr>
<td>ENGIN-140</td>
<td>Plane Surveying</td>
<td>4</td>
</tr>
<tr>
<td>ENGTC-123</td>
<td>Principles of Civil Drafting</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-125</td>
<td>Introduction to Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-126</td>
<td>Advanced Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-160</td>
<td>Introduction to Remote Sensing</td>
<td>4</td>
</tr>
<tr>
<td>GEOG-162</td>
<td>Map Design and Visualization</td>
<td>3</td>
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</tbody>
</table>

total minimum required units 30
Engineering technology

Associate in science degree
Industrial and manufacturing engineering technology

Students completing the program will be able to...
A. read the drawing for an object and visualize the geometry.
B. choose the correct manufacturing method for the object.
C. manufacture an object from a given drawing using machine tools.
D. use algebra, spreadsheets and measurement data to produce QC statistics.
E. verify that products meet the design criteria.
F. design and prototype mechanical parts under the supervision of engineers.
G. use computer integrated manufacturing (CIM) and computer numerical control (CNC) software for automation of manufacturing.

The associate of science degree in industrial and manufacturing engineering technology is offered to prepare students with the required skills to enter the workforce as manufacturing technicians. The program emphasizes traditional and modern machining techniques along with additional concepts in technical drawing and geometric dimensioning and tolerancing.

Students completing this program will learn the skills to become a manufacturing technician working with traditional machinery such as lathes, mills, saws and drill presses as well as precision measuring devices. Students will also gain skills in the use of modern 3-D printing and Computer Numerical Control (CNC) equipment for computer controlled manufacturing. Graduates of the program may work as quality control technicians, pursue jobs in research and development, rapid prototyping and fabrication, and be able to design mechanical parts working in consultation with engineers.

The DVC industrial and manufacturing engineering technology major is not intended for transfer. Option 2 (DVC General Education) is advised for students who do not intend to transfer. Students who intend to transfer to a four-year baccalaureate program should consult with a counselor regarding specific major preparation requirements at the transfer institution of their choice. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE).

Students must complete each of the courses required for the major with a “C” grade or higher. Students may not take a pass/no pass option for major courses. Certain courses may satisfy both a major and general education requirements; however, the units are only counted once.

major requirements: units
ENGIN-120 Engineering Drawing ........................................... 3
ENGTC-111* Mathematics for Technicians ........................... 3
ENGTC-160 Introduction to Industrial and Manufacturing Engineering ...................................................... 3
ENGTC-162 Geometric Dimensioning and Tolerancing ....... 1
ENGTC-165 Manufacturing Processes: Material Machining I ................................................................. 3
ENGTC-166 Manufacturing Processes: Material Machining II ....................................................... 3
ENGTC-168 Introduction to Computer Numerical Control... 3

plus at least 6 units from:
ARCHI-137 Digital Fabrication and Prototyping ......... 3
ENGTC -126 Computer Aided Design and Drafting - AutoCAD .......................................................... 3
ENGTC -129 Product Design I Using Solidworks .......... 3
ENGTC -226 Computer Aided Design and Drafting, Advanced Concepts - AutoCAD ............ 3

*ENGIN 111 satisfies DVC GE math requirement

Associate in science degree
Industrial maintenance machinist/mechanic
(mTECH)

Students completing the program will be able to...
A. discuss the role of the industrial maintenance machinist/mechanic in shop and field maintenance safety.
B. interpret blueprints and technical drawings for parts manufacturing and maintenance repair operations.
C. grind high speed steel tool bits for general purpose turning and threading.
D. cut multiple lead and acme threads on a lathe.
E. use the vertical milling machine to drill holes, index, bore hole to a specified diameter and depth, mill surfaces and edges, and use an indicator to reference work.
F. replace a single mechanical seal in a centrifugal pump.
G. align a pump shaft to a motor to a specified tolerance.

This program prepares students for jobs in the manufacturing industry including industrial machinery mechanic and machinery maintenance worker. These jobs involve repairing, installing, adjusting, or maintaining industrial production and processing machinery or refinery and pipeline distribution systems. The labor market for this high-technology, high-wage occupations in Contra Costa Alameda and Solano counties is expected to be strong.

Courses include machining, industrial hydraulics and pneumatics, shop and field maintenance, welding, basic electricity, blueprint drawing and reading, basic drafting, mathematics, computer software, and technical reading and writing. Major courses are offered sequentially over a period of three terms. This program is offered as a collaborative program with Los Medanos College in Pittsburg and Laney College in Oakland. Students may complete courses at any of the colleges in order to meet requirements. Some required courses are only offered at Laney College, Los Medanos College or DVC. Students are advised to meet with a counselor or program advisor to develop an educational plan that meets their needs.

The DVC mTECH major is not intended for transfer. Option 1 (DVC General Education) is advised for students who do not intend to transfer. Students who intend to transfer to a four-year baccalaureate program should consult with a counselor regarding specific major preparation requirements at the transfer institution of their choice. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE).
Engineering technology

Students must complete each of the courses required for the major with a “C” grade or higher. Students may not take a pass/no pass option for major courses. Certain courses may satisfy both a major and general education requirements; however, the units are only counted once.

**major requirements:**

- COMSC-101 Computer Literacy ........................................ 4
- CONST-110 Occupational Safety ....................................... 2
- ELECT-110 Introduction to Electricity ............................... 2
- ENGIN-120 Engineering Drawing ...................................... 3
- ENGT-111 Mathematics for Technicians ............................. 3
- ENGT-165 Manufacturing Processes: Material Machining I .................................................. 3
- ENGT-166 Manufacturing Processes: Material Machining II ........................................... 3
- ENGT-175 Hydraulic and Pneumatic Systems and Components ............................................. 3
- ENGT-176 Mechanical Systems and Components ................................. 3

plus at least 6 units in one of the following specializations:

**fabrication**

- ENGT-168 Introduction to Computer Numerical Control .................................................. 3

plus at least 3 units from:

- WELD-10** Basic Arc Welding Theory ................................. 3
- WELD-250** Introduction to Welding .................................. 3

**electro-mechanical**

- ELECT-120 Direct Current Circuits ................................. 4
- ELECT-121 Alternating Current Circuits .......................... 4
- ELECT-130 Motors and Motor Controllers ........................... 4
- ELECT-220 Circuit Diagnosis and Analysis:
  Troubleshooting ....................................................... 2
- ELECT-230 Electro-Mechanical Equipment .......................... 2
- ELECT-271 Programmable Logic Controllers ........................ 4

**total minimum required units** 32

**Certificate of achievement**

**Civil design drafting technology**

Students completing the program will be able to...

A. use technical drafting principles to develop technical drawings.
B. interpret construction blueprints.
C. use geometric construction and descriptive geometry to solve geometric problems.
D. create 2-dimensional and 3-dimensional Computer Aided Drawings (CAD).
E. interpret global positioning data.
F. measure land forms using ground surveying equipment.
G. apply trigonometry to math problems.
H. apply the basic laws of physics to everyday situations.

This certificate program prepares students for an entry level job as a civil drafter. Drafters work under the supervision of civil or structural engineers, architects, and/or surveyors as support staff in jobs requiring them to prepare, interpret, and revise technical drawings, or gather and categorize field data. Engineering technicians work as support staff in jobs requiring them to prepare, interpret, and revise technical drawings, or gather and categorize field data. Engineering technicians work as support staff in field laboratory and/or office environments.

To earn a certificate of achievement, students must complete each of the required courses with a “C” grade or higher. Some courses are not offered every term so please consult with the program director for assistance in scheduling classes.

**required courses:**

- CONST-114 Blueprint Reading ........................................ 3
- ENGIN-121** Engineering Drawing /Descriptive Geometry .................................................. 3
- MATH-121 Plane Trigonometry .......................................... 3
- PHYS-110 Elementary Physics ........................................... 3

plus at least 3 units from:

- ARCHI-119 Introduction to Technical Drawing ........................ 3
- ENGT-119 Introduction to Technical Drawing ........................ 3

**Associate in science degree**

**Mechanical design drafting technology**

The Engineering Technology program has removed this degree from the catalog. Students should be advised that it may not currently be possible to complete the requirements for this degree, although coursework transferred from other schools may allow a student to complete the requirements for the degree or certificate. Additionally, students can request course substitutions from the program director and any student in progress should contact the Engineering Technology program director for advisement.

**Certificate of achievement**

**Civil design drafting technology**

Students completing the program will be able to...

A. use technical drafting principles to develop technical drawings.
B. interpret construction blueprints.
C. use geometric construction and descriptive geometry to solve geometric problems.
D. create 2-dimensional and 3-dimensional Computer Aided Drawings (CAD).
E. interpret global positioning data.
F. measure land forms using ground surveying equipment.
G. apply trigonometry to math problems.
H. apply the basic laws of physics to everyday situations.

This certificate program prepares students for an entry level job as a civil drafter. Drafters work under the supervision of civil or structural engineers, architects, and/or surveyors as support staff in jobs requiring them to prepare, interpret, and revise technical drawings, or gather and categorize field data. Engineering technicians work as support staff in field laboratory and/or office environments.

To earn a certificate of achievement, students must complete each of the required courses with a “C” grade or higher. Some courses are not offered every term so please consult with the program director for assistance in scheduling classes.

**required courses:**

- CONST-114 Blueprint Reading ........................................ 3
- ENGIN-121** Engineering Drawing /Descriptive Geometry .................................................. 3
- MATH-121 Plane Trigonometry .......................................... 3
- PHYS-110 Elementary Physics ........................................... 3

plus at least 3 units from:

- ARCHI-119 Introduction to Technical Drawing ........................ 3
- ENGT-119 Introduction to Technical Drawing ........................ 3

**Associate in science degree**

**Mechanical design drafting technology**

The Engineering Technology program has removed this degree from the catalog. Students should be advised that it may not currently be possible to complete the requirements for this degree, although coursework transferred from other schools may allow a student to complete the requirements for the degree or certificate. Additionally, students can request course substitutions from the program director and any student in progress should contact the Engineering Technology program director for advisement.

**Certificate of achievement**

**Civil design drafting technology**

Students completing the program will be able to...

A. use technical drafting principles to develop technical drawings.
B. interpret construction blueprints.
C. use geometric construction and descriptive geometry to solve geometric problems.
D. create 2-dimensional and 3-dimensional Computer Aided Drawings (CAD).
E. interpret global positioning data.
F. measure land forms using ground surveying equipment.
G. apply trigonometry to math problems.
H. apply the basic laws of physics to everyday situations.

This certificate program prepares students for an entry level job as a civil drafter. Drafters work under the supervision of civil or structural engineers, architects, and/or surveyors as support staff in jobs requiring them to prepare, interpret, and revise technical drawings, or gather and categorize field data. Engineering technicians work as support staff in jobs requiring them to prepare, interpret, and revise technical drawings, or gather and categorize field data. Engineering technicians work as support staff in field laboratory and/or office environments.

To earn a certificate of achievement, students must complete each of the required courses with a “C” grade or higher. Some courses are not offered every term so please consult with the program director for assistance in scheduling classes.

**required courses:**

- CONST-114 Blueprint Reading ........................................ 3
- ENGIN-121** Engineering Drawing /Descriptive Geometry .................................................. 3
- MATH-121 Plane Trigonometry .......................................... 3
- PHYS-110 Elementary Physics ........................................... 3

plus at least 3 units from:

- ARCHI-119 Introduction to Technical Drawing ........................ 3
- ENGT-119 Introduction to Technical Drawing ........................ 3

**plus at least 3 units from:**

- ARCHI-126 Computer Aided Design and Drafting - AutoCAD .................................................. 3
- ENGT-126 Computer Aided Design and Drafting - AutoCAD .................................................. 3

plus at least 3 units from:

- ARCHI-226 Computer Aided Drafting Design,
  Advanced Concepts - AutoCAD ........................................ 3
- ENGT-226 Computer Aided Drafting Design,
  Advanced Concepts - AutoCAD ........................................ 3

plus at least 3 units from:

- GEOG 124 Thinking and Communicating Geospacially ..... 3
- GEOG-129 Field Data Acquisition and Management ....... 3
Certificate of achievement

Civil drafting, CAD

Students completing the program will be able to...

A. apply civil drafting principles to interpret and develop civil engineering maps.
B. interpret construction blueprints.
C. create 2-dimensional and 3-dimensional computer aided drawings (CAD).
D. interpret global positioning data.
E. measure land forms using ground surveying equipment.
F. use general computer software such as Microsoft Word and Excel.
G. apply trigonometry to math problems.

This certificate program prepares students for further study or an entry-level training position in jobs requiring them to prepare and revise technical drawings used in civil engineering and surveying.

To earn a certificate of achievement, students must complete each of the required courses with a “C” grade or higher. Some courses are not offered every term so please consult with the program director for assistance in scheduling classes.

**required courses**

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<thead>
<tr>
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<th>Course Title</th>
<th>Units</th>
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<tbody>
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<td>3</td>
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<td>ENGT-111</td>
<td>Mathematics for Technicians</td>
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<td>MATH-121</td>
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<tbody>
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<td>ENGT-226</td>
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<td>3</td>
</tr>
</tbody>
</table>

**total minimum required units 30**

*Certain courses required for this certificate have recommended or prerequisite coursework that could add additional units.

Certificate of achievement

Industrial and manufacturing engineering technology

Students completing the program will be able to...

A. read the drawing for an object and visualize the geometry.
B. choose the correct manufacturing method for the object.
C. manufacture an object from a given drawing using machine tools.
D. use algebra, spreadsheets and measurement data to produce QC statistics.
E. verify that products meet the design criteria.
F. design and prototype mechanical parts under the supervision of engineers.
G. use computer integrated manufacturing (CIM) and computer numerical control (CNC) software for automation of manufacturing.

The certificate of achievement in industrial and manufacturing engineering technology is offered to prepare students with the required skills to enter the workforce as manufacturing technicians. The program emphasizes traditional and modern machining techniques along with additional concepts in technical drawing and geometric dimensioning and tolerancing.

Students completing this program will learn the skills to become a manufacturing technician working with traditional machinery such as lathes, mills, saws and drill presses as well as precision measuring devices. Students will also gain skills in the use of modern 3-D printing and Computer Numerical Control (CNC) equipment for computer controlled manufacturing. Graduates of the program may work as quality control technicians, pursue jobs in research and development, rapid prototyping and fabrication, and be able to design mechanical parts working in consultation with engineers.

Students must complete each of the courses required for the major with a “C” grade or higher. Students may not take a pass/no pass option for required courses.

**plus at least 3 units from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG-124</td>
<td>Thinking and Communicating Geospatially</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-129</td>
<td>Field Data Acquisition and Management</td>
<td>3</td>
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</table>

**plus at least 6 units from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHI-135</td>
<td>Digital Tools for Design</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI-136</td>
<td>Digital Tools for Architecture</td>
<td>3</td>
</tr>
<tr>
<td>CONST-116</td>
<td>Plane Surveying</td>
<td>4</td>
</tr>
<tr>
<td>ENGIN-140*</td>
<td>Plane Surveying</td>
<td>4</td>
</tr>
<tr>
<td>ENGT-123</td>
<td>Principles of Civil Drafting</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-125</td>
<td>Introduction to Geographic Information Systems (GIS)</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-126</td>
<td>Advanced Geographic Information Systems (GIS)</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-129</td>
<td>Advanced Geographic Information Systems (GIS)</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-160</td>
<td>Introduction to Remote Sensing</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-162</td>
<td>Map Design and Visualization</td>
<td>3</td>
</tr>
</tbody>
</table>

**total minimum required units 27**

*Certain courses required for this certificate have recommended or prerequisite coursework that could add additional units.
Engineering technology

required courses:                                  units
ENGIN-120  Engineering Drawing.................................3
ENGTC-111* Mathematics for Technicians........................3
ENGTC-160  Introduction to Industrial and Manufacturing
Engineering.........................................................3
ENGTC-162  Geometric Dimensioning and Tolerancing............1
ENGTC-165  Manufacturing Processes: Material Machining I........3
ENGTC-166  Manufacturing Processes: Material Machining II.........3
ENGTC-168  Introduction to Computer Numerical Control........3
plus at least 6 units from:
ARCHI-137  Digital Fabrication and Prototyping..................3
ENGTC-126  Computer Aided Design and Drafting,
AutoCAD.............................................................3
ENGTC -129 Product Design I Using Solidworks.................3
ENGTC -226 Computer Aided Design and Drafting,
Advanced Concepts AutoCAD......................................3

Program Requirements

To earn a certificate of achievement, students must complete
12 core courses. Students must complete each course used to
meet a program requirement with a “C” grade or higher.

required courses:                                  units
COMSC-101  Computer Literacy........................................4
CONST-110  Occupational Safety........................................2
ELECT-110  Introduction to Electricity.............................2
ENGTC-120  Engineering Drawing......................................3
ENGL-098  Introduction to College Writing.........................3
ENGTC-111  Mathematics for Technicians..........................3
ENGTC-165  Manufacturing Processes: Material
Machining I.............................................................3
ENGTC-166  Manufacturing Processes: Material
Machining II.........................................................3
ENGTC-165  Manufacturing Processes: Material
Machining II.........................................................3
ENGTC-175  Hydraulic and Pneumatic Systems and
Components..........................................................3
ENGTC-176  Mechanical Systems and Components..............3
plus at least 6 units in one of the following specializations:
fabrication
ENGTC-168  Introduction to Computer Numerical
Control.................................................................3

Certificate of achievement
Industrial maintenance machinist/mechanic
(mTECH)

Students completing the program will be able to:

A. discuss the role of the industrial maintenance machinist/
mechanic in shop and field maintenance safety.
B. interpret blueprints and technical drawings for parts
manufacturing and maintenance repair operations.
C. grind high speed steel tool bits for general purpose turning
and threading.
D. cut multiple lead and acme threads on a lathe.
E. use the vertical milling machine to drill holes, index, bore
holes to a specified diameter and depth, mill surfaces and
to a specified diameter and depth, mill surfaces and
drawings, and use an indicator to reference work.
F. replace a single mechanical seal in a centrifugal pump.
G. align a pump shaft to a motor to a specified tolerance.

This program prepares students for jobs in the manufacturing
industry including industrial machinery mechanic and
machinery maintenance worker. These jobs involve repairing,
installing, adjusting, or maintaining industrial production
and processing machinery or refinery and pipeline distribution
systems. The labor market for this high-technology, high-wage occupations in Contra Costa Alameda and Solano
counties is expected to be strong.

Courses include machining, industrial hydraulics and
pneumatics, shop and field maintenance, welding, basic
electricity, blueprint drawing and reading, basic drafting,
mathematics, computer software, and technical reading and
writing. Required courses are offered sequentially over a
period of three terms. This program is offered as a collabora-
tive program with Los Medanos College in Pittsburg and
Laney College in Oakland. Students may complete courses
at any of the colleges in order to meet requirements. Some
required courses are only offered at Laney College, Los
Medanos College or DVC. Students are advised to meet with
a counselor or program advisor to develop an educational
plan that meets their needs.

Certificate of achievement –
Mechanical design drafting technology

The Engineering Technology program has removed this
degree from the catalog. Students should be advised that it
may not currently be possible to complete the requirements
for this degree, although coursework transferred from
other schools may allow a student to complete the require-
ments for the degree or certificate. Additionally, students
can request course substitutions from the program director
and any student in progress should contact the Engineering
Technology program director for advisement.

Certificate of achievement –
Mechanical drafting, CAD

The Engineering Technology program has removed this
degree from the catalog. Students should be advised that it
may not currently be possible to complete the requirements
for this degree, although coursework transferred from
other schools may allow a student to complete the require-
ments for the degree or certificate. Additionally, students
can request course substitutions from the program director
and any student in progress should contact the Engineering
Technology program director for advisement.
Certificat of accomplishment
Computer aided drafting and digital media for architecture, industrial design and engineering

Students completing the program will be able to...
A. create 2-dimensional and 3-dimensional computer aided drawings (CAD).
B. interpret construction blueprints and architectural plans (with Option A: civil engineering emphasis).
C. calculate data collected from land surveying (with Option A: civil engineering emphasis).
D. interpret simple technical drawings (with Option B: manufacturing emphasis).
E. construct 3-Dimensional models using parametric software (with Option C: CAD design emphasis).

Drafters make drawings and plans to specify dimensions, materials and processes used in the making of a final product. These drawings are guidelines for the workers who will actually build or make whatever is being produced. Drafters also make drawings from blueprints, engineering sketches, photos and other sources which show how parts and other objects work, their relation to one another, and how they will be put together. Drafters create drawings and plans to specify dimensions, materials and processes for the finished product. Such drawings and plans provide guidance to those working to complete the finished product. To earn a certificate of accomplishment, students must complete each of the required courses with a “C” grade or higher. Some courses are not offered every term. Consult with the program director for assistance in scheduling classes.

Required courses: units

- ARCHI-125 Computer Aided Design and Drafting - AutoCAD
- ENGTC-126 Computer Aided Design and Drafting - AutoCAD

plus at least 3 units from:
- ARCHI-226 Computer Aided Drafting Design, Advanced Concepts - AutoCAD
- ENGTC-226 Computer Aided Drafting Design, Advanced Concepts - AutoCAD

plus at least 3 units from:
- ARCHI-119 Introduction to Technical Drawing
- ARCHI-120 Introduction to Architecture and Environmental Design
- CONST-114 Blueprint Reading
- ENGT-119 Introduction to Technical Drawing

plus at least 3 units from:
- ARCHI-135 Digital Tools for Design
- ARCHI-136 Digital Tools for Architecture
- ARTDM-160 3D Modeling and Animation
- ENGT-129 Product Design I Using SolidWorks
- GEOG-125 Introduction to Geographic Information Systems (GIS)
- IDG-120 Introduction to Industrial and Product Design

Total minimum required units: 12

ENGTC-111 Mathematics for Technicians
3 units LR
- 54 hours lecture per term
- Prerequisite: MATH-090 or MATH-090E or MATH-090SP or equivalent
- Formerly ENGIN-111

This course is a study of mathematical topics used for technical applications in the workplace. Topics include algebraic operations, factoring, fractional equations, quadratic equations, rational, square root, exponential, absolute value and logarithmic functions. Calculation of surface areas and volumes of objects, polynomials and systems of equations is covered. CSU

ENGTC-119 Introduction to Technical Drawing
3 units SC
- 36 hours lecture/72 hours laboratory per term
- Note: Same as ARCHI-119. For students with no previous drafting experience. Credit by examination option available.
- Formerly ENGIN-119

This course is an introduction to the use of technical drawing tools, technical lettering and line work, geometric construction, sketching and shape description, orthographic projection, dimensioning, section views, auxiliary views and pictorials. Introduction to the use of computers to produce technical drawings. CSU

ENGTC-123 Principles of Civil Drafting
3 units LR
- 36 hours lecture/72 hours laboratory per term
- Recommended: ENGT-111 (may be taken concurrently), ENGT-119 and ENGT-126 or equivalents
- Formerly ENGIN-123

Introduction to civil drafting as it relates to topographic maps and charts. Course covers reading, interpreting and constructing a variety of maps used for civil engineering such as surveyor maps, plat and plot maps, and aerial maps. Students will use both manual and computer methods for drafting of maps. CSU
**Engineering technology**

**ENGTC-162  Computer Aided Design and Drafting - AutoCAD**
3 units SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ENGTG-119 or ARCHI-119 or equivalent
- Note: Same as ARCHI-126. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree. Credit by examination option available.
- Formerly ENGIN-126

This introductory course covers the fundamentals of AutoCAD, a computer design drafting program, applied to the creation of technical drawings. Hands-on training utilizing a comprehensive overview of the software package and its applications to engineering drafting is stressed. CSU, UC (credit limits may apply to UC - see counselor)

**ENGTC-129  Product Design I Using SolidWorks**
3 units SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ARCHI-119 or ENGTG-119 or equivalent
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree. Credit by examination option available.
- Formerly ENGIN-129

This course will introduce students to product design using SolidWorks. Students will learn the functions of SolidWorks and how to apply these functions within the product design process. CSU

**ENGTC-160  Introduction to Industrial and Manufacturing Engineering**
3 units LR
- 54 hours lecture per term
- Recommended: ENGTG-111 or equivalent
- Formerly ENGIN-160

This course presents methods of manufacturing steel, aluminum and plastic products from ore mining to finished goods. Blueprint reading, quality assurance, types of machinery used in manufacturing, methods of casting, forming, forging, extrusion and sintering of materials will also be covered. CSU, UC

**ENGTC-162  Geometric Dimensioning and Tolerancing**
1 unit LR
- 9 hours lecture/27 hours laboratory per term
- Recommended: ENGTG-111 or equivalent
- Formerly ENGIN-162

This course will present the principles of geometric dimensioning and tolerancing (GDT). Topics include GDT symbols, datum planes, material conditions, orientation, location, profile and runout tolerances. Laboratory assignments emphasize measurement using granite tables and pin and height gauges. CSU, UC

**ENGTC-165  Manufacturing Processes: Material Machining I**
3 units LR
- 36 hours lecture/72 hours laboratory per term
- Recommended: ENGTG-119 or ARCHI-119 or equivalent
- Formerly ENGIN-165

This course introduces practical and theoretical aspects of machine tool processes including basic blueprint interpretation, use of hand tools, measuring instruments and gauges, layout, inspection techniques and metal identification. Set up and operation of drill presses, band saw, grinders, lathes, milling machines and related tools will be covered. CSU

**ENGTC-166  Manufacturing Processes: Material Machining II**
3 units LR
- 36 hours lecture/72 hours laboratory per term
- Recommended: ENGTG-165 or equivalent
- Formerly ENGIN-166

This course presents precision measuring and inspection practices, mechanical hardware, advanced lathe and vertical milling machine operations; surface grinding; thread cutting; boring on lathes and vertical milling machines and special work holding devices. Topics include the theory and application of advanced techniques for machining ferrous/non-ferrous metals, plastics and non-traditional materials in addition to an introduction to Geometric Dimensioning and Tolerancing (GDT) and properties of materials associated with machinability, heat treating and hardness testing. CSU

**ENGTC-168  Introduction to Computer Numerical Control**
3 units SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ENGIN-120 or equivalent
- Formerly ENGIN-168, ENGIN-172

This course introduces students to Computer Numerical Control (CNC) machining. Students will learn the techniques of developing and programming cutting tool paths and movements using three-dimensional CAD models and working drawings. Instruction will cover the use of Computer Integrated Manufacturing package (CIM) software and visualization of cutting operations. Topics will also include setup and operation of CNC equipment for manufacturing. CSU

**ENGTC-175  Hydraulic and Pneumatic Systems and Components**
3 units SC
- 18 hours lecture/108 hours laboratory per term
- Formerly ENGIN-175

This course covers the practical and theoretical aspects of hydraulic and pneumatic systems. Topics include concepts, theory and common systems, components and devices. The laboratory emphasizes hands-on exercises in operation, maintenance and mechanical skills. CSU
ENGTC-176  Mechanical Systems and Components
3 units  SC
- 18 hours lecture/108 hours laboratory per term
- Formerly ENGIN-176

This course covers mechanical systems with an emphasis on mechanical drives, flexible belt drives, lubrication, bearings, vibration, and rotating equipment. Topics include operation, maintenance and repair of mechanical systems and components used in a variety of industrial occupations. CSU

ENGTC-226  Computer Aided Drafting Design, Advanced Concepts - AutoCAD
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Recommended: ENGTC-126 or ARCHI-126 or equivalent
- Note: Same as ARCHI-226. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.
- Formerly ENGIN-226

This course covers the concepts and applications of constructing digital three-dimensional (3D) models and photorealistic renderings for presentation using AutoCAD, 3D Studio Max and Alias. Advanced techniques for surface wireframe and solid modeling will be presented. Students will explore lighting, materials mapping and rendering as they apply to architecture, engineering and industrial design. CSU, UC (credit limits may apply to UC - see counselor)

ENGLISH – ENGL

Obed Vazquez, Dean
English Division
Faculty Office Building, Room 136

Possible career opportunities
Career options that are available through the study of English include: advertising copy writer, columnist, editor, information specialist, interpreter, lawyer, lexicographer, legislative assistant, publisher, researcher, teacher, technical writer, and writing consultant. Some career options may require more than two years of college study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts degree

English

Students completing the program will be able to...

A. demonstrate knowledge of and familiarity with the methods of interpreting literature across genres.
B. assess, evaluate, and analyze ideas expressed in text or in spoken language.
C. create (write or present) coherent arguments that evidence clear prose and synthesize diverse bodies of knowledge.
D. conceptualize, write, workshop, present for feedback, revise and edit an original text.

The English major at Diablo Valley College (DVC) offers students the opportunity to prepare for a broad range of professions through the study of language, literature, and composition, as well as the opportunity to transfer to UC, CSU, and other four-year colleges and universities to earn a bachelor’s degree. The English major curriculum at DVC hones a student’s critical thinking, reasoning, and communication skills as it also prepares students pursuing careers in law, government, business, entertainment (film, television, and theater), advertising, writing, editing, and education.

DVC’s English major consists of 21 units of study. Students are required to take 6 units of core reading and composition courses, where they will develop their ability to craft clear prose through writing, reading, and research. In addition, students are required to complete 9 units of core genre and survey courses, and 6 units of specialized literature and writing courses, thereby developing individual interests and breadth of knowledge.

The DVC English major is intended for transfer. Students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is not generally advised.

To earn an associate in arts degree with a major in English, students must complete each course used to meet a major requirement with a “C” grade or higher, maintain an overall GPA of 2.5 or higher in the coursework required for the major and complete general education requirements as listed in the catalog. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

major requirements:

units

Group 1: Core reading and composition courses
complete at least 6 units from:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tr>
<td>ENGL-122*</td>
<td>Freshman English: Composition and Reading</td>
<td>3</td>
</tr>
<tr>
<td>ENGL-123*</td>
<td>Critical Thinking: Composition and Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL-126*</td>
<td>Critical Thinking: The Shaping of Meaning in Language</td>
<td>3</td>
</tr>
</tbody>
</table>
English

Group 2: Core genre
complete at least 3 units from:
ENGL-150 Introduction to Literature ...................................... 3
ENGL-151 The Short Story .................................................. 3
ENGL-153 Contemporary Poetry ............................................. 3
ENGL-180 Drama and Performance as Literature .................. 3

Group 3: Core survey
complete at least 6 units from:
ENGL-154 Shakespeare and His World .................................. 3
ENGL-252 Early English Literature ......................................... 3
ENGL-253 Survey of Late English Literature ......................... 3
ENGL-262 Survey of American Literature I
(First Contact-1865) ......................................................... 3
ENGL-263 Survey of American Literature II
(1865 – Present) ............................................................... 3

Group 4: electives - Specialized literature and writing
complete at least 6 units from:
ENGL-152 The Short Film .................................................... 3
ENGL-162 Language, Literature and Culture ............................ 3
ENGL-163 Asian American Literature ..................................... 3
ENGL-164 Native American Literatures .................................. 3
ENGL-166 African American Literature ................................... 3
ENGL-167 Latin American Literature ...................................... 3
ENGL-168 The Literatures of America ...................................... 3
ENGL-170 World Mythology .................................................. 3
ENGL-172 The Bible as Literature ............................................ 3
ENGL-173 Queer Literature Across Cultures ............................... 3
ENGL-175 Science Fiction and Fantasy Literature ..................... 3
ENGL-176 The Graphic Novel as Literature ............................... 3
ENGL-177 Children’s Literature .............................................. 3
ENGL-190 Multicultural Literature by American Women ............ 3
ENGL-222* Creative Writing ................................................ 3
ENGL-223 Short Story Writing .............................................. 3
ENGL-224 Poetry Writing .................................................... 3
ENGL-225* Creative Nonfiction Writing .................................. 3

total minimum required units 21

*The above courses have specific prerequisites. See course
description for details.

**Students taking English 180 may need to take one more course
from the above list as Literature of the Drama does not articulate
with some university English programs. If so, 3 units earned from
English 180 will apply to Group 4: Electives.

Associate in arts in English for transfer
Students completing the program will be able to...
A. demonstrate knowledge of and familiarity with the
methods of interpreting literature across genres.
B. assess, evaluate, and analyze ideas expressed in text or in
spoken language.
C. create (write or present) coherent arguments that evidence
clear prose and synthesize diverse bodies of knowledge.
D. conceptualize, write, workshop, present for feedback,
revise and edit an original text.

The English major at Diablo Valley College (DVC) offers students the opportunity to prepare for a broad range of professions through the study of language, literature, and composition, as well as the opportunity to transfer to UC, CSU, and other four year colleges and universities to earn a bachelor’s degree. The English major curriculum at DVC hones a student’s critical thinking, reasoning, and communication skills as it also prepares students pursuing careers in law, government, business, entertainment (film, television, and theater), advertising, writing, editing, and education.

The associate in arts in English for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

• Complete 60 semester CSU-transferable units.
• Complete the California State University-General Education pattern (CSU GE); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
• Complete a minimum of 18 semester units in the major.
• Obtain a minimum grade point average (GPA) of 2.0.
• Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSU GE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

major requirements: units
ENGL-123 Critical Thinking: Composition and Literature.......... 3
ENGL-126 Critical Thinking: The Shaping of Meaning in
Language................................................................. 3

plus at least 6 units from:
ENGL-252 Early English Literature ...................................... 3
ENGL-253 Survey of Late English Literature ........................... 3
ENGL-262 Survey of American Literature I
(First Contact-1865) ......................................................... 3
ENGL-263 Survey of American Literature II
(1865 – Present) ............................................................... 3
ENGL-272 Early World Literature .......................................... 3
ENGL-273 Late World Literature ........................................... 3
ENGL-093  Sentence Structure and Punctuation
1 unit  P/NP
• Non degree applicable
• 9 hours lecture/27 hours laboratory per term
This course focuses specifically on developing skills in sentence structure and punctuation and is especially appropriate for students enrolled in other basic skills English courses.

ENGL-095  Studies in Reading and Writing
.5-5 units  SC
• Non degree applicable
• Variable hours
• Recommended: ENGL-096 and ENGL-098 or equivalent recommendation from the assessment process
A supplemental course in reading and writing to provide a study of current concepts and problems in reading, writing, and related substantive areas. Specific topics will be announced in the schedule of classes.

ENGL-096  Introduction to College Reading and Study Skills
3 units  SC
• Non degree applicable
• 45 hours lecture per term
• Recommended: Reading/writing assessment process or ESL-096A or equivalent
• Note: ESL students are strongly encouraged to follow the ESL assessment process. ESL-096A is recommended for ESL students
This course is designed for students who need work in basic reading and study skills required for college. Writing will be an essential component of this course. Students will learn to identify main ideas and supporting details and to determine methods of organization and relationship of ideas. A primary aim is to increase students’ enjoyment of reading as well as their ability to comprehend, interpret, and remember what they read. Students will practice using writing to respond to and demonstrate their understanding of what they read. The course will also emphasize effective study skills and vocabulary development.

ENGL-097  Introduction to Integrated College Reading and Writing
5 units  SC
• Non degree applicable
• 90 hours lecture/18 hours laboratory per term
• Recommended: ESL-096A, ESL-098A or equivalents
This course provides an integrated approach to reading and writing, preparing students for ENGL-117 or ENGL-116 and 118. Students will be introduced to academic culture and to the practices associated with both academic reading and writing. Methods to interact with and comprehend texts are presented to develop and improve reading, writing, and critical-thinking skills. Students will study and practice the ways reading and writing are connected. This course will also emphasize vocabulary development and study skills. A variety of texts serve as a foundation for skill practice, discussion, and writing assignments, both informal and formal.
**ENGL-098**  Introduction to College Writing  
3 units  SC  
- Non degree applicable  
- 54 hours lecture/18 hours laboratory per term  
- Recommended: Reading/writing assessment process or ESL-098A or equivalent  
- Note: ESL students are strongly encouraged to follow the ESL assessment process. ESL-098A is recommended for ESL students.

This course is designed to help students express their ideas in writing, and gain confidence in writing essays. Students will compose essays for an academic audience and learn to write clear, complete and varied sentences and coherent paragraphs. Students will read and learn to analyze a variety of short texts in order to develop ideas for writing. Students will also become familiar with the steps of the writing process: drafting, revising, editing, and proofreading. An additional goal is for students to learn basic rules of grammar, and punctuation.

**ENGL-099**  English Grammar and Usage  
3 units  SC  
- Non degree applicable  
- 54 hours lecture per term

This course provides intensive instruction on the rules of grammar, punctuation, spelling and their application in writing. Students will learn to recognize grammatical errors in their writing, to make informed judgments about the style and syntax of the sentences they write, to reduce the number of misspelled words, and to use a broader vocabulary in their writing. The course is intended to prepare students for more advanced English classes and to increase their knowledge of the fundamentals of English.

**ENGL-116**  College Reading Development  
3 units  SC  
- 54 hours lecture per term  
- Recommended: ENGL-096 or reading/writing assessment process or equivalent  
- Note: Only one of ENGL-116, 117, 118 or ESL-117A may be applied to the units required for the associate degree.

This course is designed to develop strategies for reading a variety of college-level materials. Students will learn ways to interact with what they read in order to increase appreciation as well as comprehension. The course will cover close analysis of reading, flexible approaches to reading, vocabulary development, and study skills. The central focus throughout the course will be on reading comprehension as an active process, with written response as the primary method for evaluating and analyzing readings.

**ENGL-117**  Integrated College Reading and Writing Development  
5 units  SC  
- 90 hours lecture per term  
- Recommended: ENGL-096 and ENGL-098 or equivalents  
- Note: This course is equivalent to the completion of ENGL-116 and ENGL-118 or ESL-117A. Only one of ENGL-116, 117, 118 or ESL-117A may be applied to the units required for the associate degree.

This course provides an integrated approach to reading and writing for those students who have assessed into both ENGL-116 and 118. It provides the necessary preparation for ENGL-122. Students will prepare for college-level work; develop and improve their critical reading, writing, and thinking skills; and improve their vocabulary and study skills. Students will actively engage with their peers, study and practice the ways reading and writing inform each other, and learn ways to interact with, appreciate, and comprehend the texts they read. Students will read a variety of texts and complete both formal and informal writing assignments connected to these readings. The central focus throughout the course will be on the integration and synthesis of reading and writing.

**ENGL-118**  College Writing Development  
3 units  SC  
- 54 hours lecture per term  
- Recommended: ENGL-098 or reading/writing assessment process or equivalent  
- Note: Only one of ENGL-116, 117, 118 or ESL-117A may be applied to the units required for the associate degree.

This course helps students to improve their expression of ideas in college-level expository essays. Through continual writing practice, students will improve their skills in observation, fluency, organization, and revision, as well as other parts of the writing process. Students will learn to analyze a variety of texts with an emphasis on nonfiction.

**ENGL-120A**  Grammar for Writing and Editing for Multilingual Students  
1 unit  SC  
- Non degree applicable  
- 18 hours lecture per term

This course is designed to increase students’ awareness of their own use of written language, strengthen their linguistic monitors and give them practice in editing strategies which will enable the accurate, meaningful, and appropriate usage of linguistic forms in written expression.
ENGL-122  Freshman English: Composition and Reading
3 units LR
- 54 hours lecture per term
- Prerequisite: Reading/writing assessment process or ENGL-116 and ENGL-118 or ENGL-117 or ESL-117A or equivalent
This course engages students regularly in the writing and reading process with a substantial amount of college-level reading. Students will apply disciplined thought to language in order to comprehend and analyze college-level readings and to compose college-level essays that are coherent, detailed, and free of serious error. In their essays, students will use a variety of types of support including primary and secondary research. Students will employ varied rhetorical strategies used by accomplished writers. C-ID ENGL 100, CSU, UC

ENGL-122A Freshman English: Composition and Reading for Multilingual Students
3 units LR
- 54 hours lecture per term
- Prerequisite: Reading/writing assessment process or ENGL-116 and ENGL-118 or ENGL-117 or ESL-117A or equivalent
This course engages multilingual students regularly in the writing and reading process with a substantial amount of college-level reading. Multilingual students will apply disciplined thought to language in order to comprehend and analyze college-level readings and to compose college-level essays that are coherent, detailed, and free of serious error. In their essays, multilingual students will use a variety of types of support including primary and secondary research. Multilingual students will employ varied rhetorical strategies used by accomplished writers.

ENGL-123  Critical Thinking: Composition and Literature
3 units LR
- 54 hours lecture per term
- Prerequisite: ENGL-122 or equivalent
ENGL-123 is a continuation of ENGL-122 emphasizing the study of poetry, fiction, and drama. The course is designed to encourage continued improvement in essay composition through a focus on critical thinking about literary works. The course will increase understanding of the creation of aesthetic meaning and the use of symbolic forms in language and thought; and introduce students to several literary genres in the context of culture. C-ID ENGL 120, CSU, UC

ENGL-124  The Nature of Language: An Introduction to Linguistics
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course introduces students to the study of formal, psychological and socio/cultural properties of language. Students will learn the analysis, description, and functions of language in relation to culture, society, and personality. CSU, UC

ENGL-126  Critical Thinking: The Shaping of Meaning in Language
3 units LR
- 54 hours lecture per term
- Prerequisite: ENGL-122 or equivalent
This course will focus on the development of logical reasoning, analysis of primarily expository and persuasive texts, and analytical and argumentative writing skills. It is designed to develop critical thinking, reading, and writing skills beyond the level expected in ENGL-122. This course will concentrate on how expository texts make their arguments as demonstrated through higher levels of critical thinking such as analysis, synthesis and evaluation. C-ID ENGL 105, CSU, UC

ENGL-140  Tutor Training
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course introduces students to the basic principles and methods of tutoring, including but not limited to the tutoring sequence, the Socratic method of questioning, communication skills, and learning theory. Students will receive instruction on how to work with tutees who have difficulties comprehending reading, developing writing and utilizing study skills with the intent of making those tutees independent learners. CSU

ENGL-150  Introduction to Literature
3 units SC
- 54 hours lecture per term
- Recommended: ENGL-122 or equivalent
This course will focus on representative works from the four major genres of literature (poetry, drama, the short story, and the novel). This course will teach students to recognize the distinguishing elements of each literary form and develop competency in the methods used to analyze all literature. The choice of texts will reflect the historical development of these genres in order to enhance students’ appreciation of the extent to which imaginative literature reflects its historical moment and is shaped by expressive and visual arts of the time. CSU, UC
English

ENGL-151  The Short Story
3 units  SC
• 54 hours lecture per term
• Recommended: ENGL-122 or equivalent
This course is an introduction to the short story: themes, forms, history of the form, individual writers' techniques. Students read and discuss short stories and become more independent critics of them. In addition, students in the course will examine a variety of critical approaches to literature, understand the significance of these perspectives, and apply this information in order to develop a deeper understanding of the text. CSU, UC

ENGL-152  The Short Film
3 units  SC
• 54 hours lecture per term
• Recommended: ENGL-122 or equivalent
This survey course explores the history, nature, and structure of the short narrative, documentary, and experimental film. The course compares and contrasts literature to film, noting how each medium deals with theme and structure. Many films from the DVC collection, including some showing the lives and stories of members of American subcultures and cultures around the world, along with new releases from major short-films distributors, will be viewed, discussed and written about. CSU, UC (credit limits may apply to UC - see counselor)

ENGL-153  Contemporary Poetry
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course focuses on the reading, critical study, critical analysis, and discussion of contemporary poetry. Postmodern American poetry is emphasized, although consideration will also be given to contemporary world poetry and other poetry written in English. Earlier traditions, such as modernism, will be briefly discussed. Historical, social, cultural, and psychological contexts will be provided. Consideration will be given to the forms, functions, and definitions of the poetry studied. Students should reach a heightened awareness and understanding of language and artistic excellence. CSU, UC

ENGL-154  Shakespeare and His World
3 units  SC
• 54 hours lecture per term
• Recommended: ENGL-122 or equivalent
This course will focus on the language, structure, characterization, and philosophy of Shakespeare's plays. The historical, social, and artistic forces, which helped to shape his works during the Elizabethan and Jacobean ages, will be discussed. The relationship between Shakespeare's work as literature and as performing art, experienced in theater, film, opera, or television will be examined. CSU, UC

ENGL-155  Topics in English
.5-3 units  SC
• Variable hours
A supplemental course in English to provide a study of current concepts and problems in English and related substantive areas. Specific topics will be announced in the schedule of classes. CSU

ENGL-162  Language, Literature and Culture
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-116/118 or equivalent
This course examines language, literature and the arts from a multi-cultural context. Students will read stories, drama, poetry and essays that reflect a broad range of cultural viewpoints; they will observe and analyze relevant print and visual media; and they will compare and consider such artistic forms as architecture, music, fashion and painting in the context of compared cultures. Attention will be devoted to understanding the linguistic or attitudinal challenges posed by cross-cultural communication. The course will be helpful to American-born students seeking a wider cultural perspective and to International students and other advanced ESL students in their acculturation and language development efforts. CSU, UC

ENGL-163  Asian American Literature
3 units  SC
• 54 hours lecture per term
• Recommended: ENGL-122 or equivalent
This course introduces students to a variety of literary works from the Asian American culture, which are significant in illuminating the Asian American cultural experience. Readings are chosen for their literary, historical, cultural, philosophical and psychological importance. CSU, UC

ENGL-164  Native American Literatures
3 units  SC
• 54 hours lecture per term
• Recommended: ENGL-122 or equivalent
This course presents the literary traditions and cultures of Native Americans, and through the study of various oral and written literary works (such as songs, myths, folktales, oratories, autobiographies, films, plays, poetry and prose) will examine issues important to Native peoples, such as cultural identity, language, self-determination. CSU, UC

ENGL-166  African American Literature
3 units  SC
• 54 hours lecture per term
• Recommended: ENGL-122 or equivalent
This course is a study of the major works of fiction and poetry by African-American writers. Students will gain an awareness of main themes, concepts, and characteristics of this literature and its historical roots. Students will also explore African-American literature's role in rhetoric, religion, philosophy, history, music, or other arts or literature. CSU, UC
ENGL-167  Latin American Literature  
3 units  SC  
• 54 hours lecture per term  
• Recommended: ENGL-122 or equivalent  
The course focuses on the literature of Latin American cultures. Through analysis of poetry, fiction, drama, music and film, students will explore political, social, historical, and psychological elements that comprise the voices of Latin Americans. CSU, UC

ENGL-168  The Literatures of America  
3 units  SC  
• 54 hours lecture per term  
• Recommended: ENGL-122 or equivalent  
This course examines literary works of American authors from underrepresented groups: African American, Asian American, Mexican American, and Native American. We will read selected contributions from novels, plays, short stories, nonfiction and poetry to understand the influences that shape the literatures of America. CSU, UC

ENGL-170  World Mythology  
3 units  SC  
• 54 hours lecture per term  
• Recommended: ENGL-122 or equivalent  
This course explores myth as a vital part of human experience, individual and collective, past and present. Myths from a wide range of cultures (including Native American, African, Asian, Middle Eastern and European) are examined. Myths in folklore, ritual, literature and the arts are compared with regard to their thematic content and the beliefs and values they reflect. CSU, UC

ENGL-172  The Bible As Literature  
3 units  SC  
• 54 hours lecture per term  
• Recommended: ENGL-122 or equivalent  
Students read the Hebrew scriptures (Old Testament) and the New Testament as literature, studying the historical, intellectual, and spiritual environments in which the texts were composed. Major themes and characters are given close attention, as is the development of the canon. Literary genres such as poetry, essays, letters, and epics in scripture are compared with those genres found in other world literatures. CSU, UC

ENGL-173  Queer Literature Across Cultures  
3 units  SC  
• 54 hours lecture per term  
• Recommended: ENGL-122 or equivalent  
This course is a survey of queer literature. Literary genres covered include fiction, poetry, drama, and memoir. The wide-range of Lesbian Gay, Bisexual, Transgender, Queer (LGBTQ) experience is examined from various cultural points of reference, and students will read selections from a variety of cultures. This cross-cultural selection may include works by Native-American, Middle-Eastern, African, South-American, Asian, European, and American identified LGBTQ authors (including Latino/a, Asian-American, and African-American, and more). Additionally, students will analyze the ways historical, social, economic, and psychological forces shape LGBTQ cultures and the literatures they produce. The distinguishing elements of different literary genres and methods used to analyze literature of any genre will also be covered. CSU, UC

ENGL-175  Science Fiction and Fantasy Literature  
3 units  SC  
• 54 hours lecture per term  
• Recommended: ENGL-122 or equivalent  
This course will offer reading, critical study, and discussion of speculative fiction (a broad term encompassing both science fiction and fantasy) as a literary form with consideration of major authors, themes, developments in the genre over time, critical approaches to the genre, and a variety of texts from diverse cultures. Because of the genres unique characteristics, its significant works so often explore the political, psychological, and/or socio-economic factors at work in society. Formal analysis will identify key archetypal themes and characters; these may include but are not limited to the alien within and without, artificial intelligence and the nature of human experience, utopias and dystopias in imagination, the hero’s journey, and speculative fiction as a modern mythology. The distinguishing elements of different literary genres and methods used to analyze literature of any genre will also be covered. CSU, UC

ENGL-176  The Graphic Novel as Literature  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
This course presents the graphic novel as a unique branch of literature. The course focuses on the graphic novel as a literary and artistic medium capable of exploring any topic in a sophisticated and compelling manner. Exploring a range of genres in fiction (superhero, coming of age, experimental) and non-fiction (memoir and reportage), course content will also cover literary and artistic techniques used in composing graphic literature, the historical and international origins of the form, and its current significance in contemporary literature and culture. CSU, UC
ENGL-177  Children's Literature  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course examines texts written for children as literature, applying sophisticated methods of literary criticism. The course places children's literature in a historical context, tracing its development from earliest oral origins to the present, and considers the contributions and points of view of various populations including African American, Native American, European American, Asian American, and Hispanic. The course material includes literature from various cultures and from various time periods. CSU, UC

ENGL-178  Young Adult Literature  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course presents an overview of young adult literature, designed to engage adult readers in a critical appraisal of the genre, its unique features and history, literary merit, and cultural influence. Topics include history of young adult literature, a study of its classic texts, works of diverse ethnic and under-represented groups, and the relationship of adolescent psychology to this genre. CSU, UC

ENGL-180  Drama and Performance as Literature  
3 units  SC  
- 54 hours lecture per term  
- Recommended: ENGL-122 or equivalent  
- Note: Attendance at one or more live performances is required.  
This course presents reading, critical study, and discussion of dramatic literature as a literary form by authors from diverse time periods and cultures. Dramatic structure, elements of performance (dramatic expression, stage direction, rhythm, etc.), and literary devices that characterize this literary genre are emphasized. Students will analyze the ways dramatic literature reflects and captures historical, social, cultural, and economic forces and can serve as a unique literary artifact. The recognition of the distinguishing elements of literary forms and to development competency in analyzing literature of any genre are presented. CSU, UC

ENGL-190  Multicultural Literature by American Women  
3 units  SC  
- 54 hours lecture per term  
- Recommended: ENGL-122 or equivalent  
This course presents literature by and about women from at least three of the following cultural, ethnic, or racial groups: African American, Native American, European American, Asian American, and Hispanic. Under scrutiny will be women’s prescribed role in society as well as the language, ideology, substance, and form of the literature by them. Literature considered can include poetry, short stories, novels, graphic novels, plays, and memoirs. CSU, UC

ENGL-222  Creative Writing  
3 units  SC  
- 54 hours lecture per term  
- Prerequisite: Eligibility for ENGL-122 or equivalent  
In this course, students read in different genres—primarily fiction and poetry—in order to learn various writing techniques, styles, and conventions. This study leads to the composition of original poems and short prose pieces that students workshop in class, focusing on the revision and editing process. C-ID ENGL 200, CSU, UC

ENGL-223  Short Story Writing  
3 units  SC  
- 54 hours lecture per term  
- Prerequisite: Eligibility for ENGL-122 or equivalent  
This course provides an in-depth study of the elements of the short story. The elements of the short story form will be examined through reading and writing; students will write to prompts and complete original full-length short stories. Students’ short stories will be critiqued by both the full class and the instructor in both one-on-one and workshop settings. CSD, UC

ENGL-224  Poetry Writing  
3 units  SC  
- 54 hours lecture per term  
- Prerequisite: Eligibility for ENGL-122 or equivalent  
This course is an in-depth study of the elements of poetry. Students write original poems for discussion and criticism by both class and instructor. CSU, UC

ENGL-225  Creative Nonfiction Writing  
3 units  SC  
- 54 hours lecture per term  
- Prerequisite: Eligibility for ENGL-122 or equivalent  
In this course, students analyze classic and contemporary narrative nonfiction writing, including memoir, travel, nature and personal essays, to identify the aspects and strategies of successful creative nonfiction essays. The readings represent the diverse perspectives of African-American, Native American, European-American, Asian-American, and Hispanic writers. Students then employ the identified literary techniques to plan and compose creative nonfiction essays with an emphasis on the strategies necessary to develop an authentic narrative voice. Students present their writing to the class and instructor for discussion, review, and revision suggestions. CSU, UC
ENGL-252 Early English Literature  
3 units SC  
- 54 hours lecture per term  
- Prerequisite: ENGL-122 or equivalent  
Students read characteristic and significant British literature from its beginnings to Johnson; examine the evolution of style and manner in the written form of the language; appreciate the influence of the cultural heritage upon native art forms, ideas and institutions; and generally learn to read literature more skillfully. The course relates the literature to historical and cultural developments as expressions of periods and their styles and consciously relates that to at least one art - painting, music, or architecture. C-ID ENGL 160, CSU, UC  

ENGL-253 Survey of Late English Literature  
3 units SC  
- 54 hours lecture per term  
- Prerequisite: ENGL-122 or equivalent  
This course surveys English literature of the nineteenth and twentieth centuries. Students will read poems, fiction, drama and non-fiction from the Romantic, Victorian, Modern and Post-colonial periods. Attention will be focused on the development of literary forms and the relation between texts and broader historical and cultural themes and conditions. Genius, invention, tradition, and creativity in social and political contexts will be explored. Topics include representations of class, gender, race, nature, and the self; critical questions such as the function of literature, the conventions of literary periods, canonicity, and issues of literary production. Students will also examine the aesthetic and/or cultural relationship between literature and one other art such as painting, music, or architecture. C-ID ENGL 165, CSU, UC  

ENGL-252 Early English Literature  
3 units SC  
- 54 hours lecture per term  
- Prerequisite: ENGL-122 or equivalent  
This course introduces students to Americaís literary traditions and a wide range of writers from the origins and first contact to 1865. Some of the most significant works of American literature may be studied from the American Renaissance; Native American, African American, and Hispanic perspectives; popular culture of the time, the abolitionist movement, and the womenís rights movement. Authors may include Emerson, Boudinot, Melville, Whitman, Poe, Fanny Fern, and Harriet Jacobs. C-ID ENGL 130, CSU, UC  

ENGL-263 Survey of American Literature II (1865 - Present)  
3 units SC  
- 54 hours lecture per term  
- Prerequisite: ENGL-122 or equivalent  
This course is a survey of major literary works produced by American poets, prose authors, and playwrights from 1865 until the present. Students will read poetry, short fiction, novels, non-fiction--both short and book-length--and drama. Literary movements, significant authors, and cultural movements in context will be studied. Style, voice, canon-formation, perceptions of gender and ethnicity and, how plurality, immigration and social constructs inspire, define and provoke literary works will also be explored. Defining what is American literature is a central question of the course. C-ID ENGL 135, CSU, UC  

ENGL-272 Early World Literature  
3 units SC  
- 54 hours lecture per term  
- Recommended: ENGL-122 or equivalent  
This course introduces students to representative oral and written literature from cultures around the world from ancient times to the mid-seventeenth century in modern English translations. C-ID ENGL 140, CSU, UC  

ENGL-273 Late World Literature  
3 units SC  
- 54 hours lecture per term  
- Recommended: ENGL-122 or equivalent  
This course is a survey of selected literary works in English or English translation from cultures around the world from the seventeenth century to modern times. From the Enlightenment rise of modern science to the present, topics may include major literary movements since the nineteenth century: Romanticism with its focus on individual potential and nature; Realism and the rise of great fiction with psychological depth; Modernist experimentation with form and grappling with the shattering of traditional beliefs and views of the world; and post-colonial and contemporary literature reflecting the new world order and global context following World War II. C-ID ENGL 145, CSU, UC  

ENGL-298 Independent Study  
.5-3 units SC  
- Variable hours  
- Note: Submission of acceptable educational contract to department and Instruction Office is required.  
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU
English as a Second Language – ESL

Obed Vazquez, Dean
English Division
Faculty Office Building, Room 136

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

The English as a Second Language (ESL) program offers a broad range of courses in reading, writing, grammar, and oral skills communication that are organized into increasing levels of skill development. The low-intermediate level consists of a single course that combines reading, writing, and speaking skills development. The intermediate, high-intermediate, and advanced levels consist of separate courses in reading, writing, grammar, and oral skills. For students at the high-advanced ESL level, an integrated reading and writing course, English 117A, is offered. Completion of English 117A provides English language learners with an entry point to college-level coursework.

Students may begin at any ESL level and complete courses individually or in sequence. The courses are organized into certificates of accomplishment in ESL:

- ESL conversation
- Intermediate ESL reading and writing
- Advanced ESL reading and writing
- Transition to college level English

To earn a certificate, students must complete each of the required courses with a grade of “C” grade or higher.

Certificate of accomplishment

ESL conversation
Students completing the program will be able to...
A. demonstrate confidence and skills in English pronunciation.
B. demonstrate confidence and skills in listening to and understanding English.
C. demonstrate skills in English conversation, including a mock job interview.

required courses: units
ESL-075 Intermediate Oral Communication Skills ........ 2
ESL-085 High-Intermediate Oral Communication Skills ................................................. 2
ESL-095 Advanced Oral Communication Skills ........ 2

Certificate of accomplishment

Intermediate ESL reading and writing
Students completing the program will be able to...
A. demonstrate college-essay writing skills.
B. demonstrate college-level critical reading skills.
C. demonstrate critical thinking skills and prepare them for more advanced college-level courses.

required courses: units
ESL-076 Intermediate Reading and Comprehension Skills ........................................... 3
ESL-078 Intermediate Writing Skills .............................................................................. 3
ESL-086 High Intermediate Reading Comprehension ............................................ 3
ESL-088 High Intermediate Writing Skills ............................................................ 3

Certificate of accomplishment

Advanced ESL reading and writing
Students completing the program will be able to...
A. demonstrate advanced-level essay writing skills.
B. demonstrate advanced-level critical reading skills.
C. demonstrate advanced-level critical thinking skills.
D. demonstrate language control and sentence clarity in writing by focusing on the grammar in the context of their writing.
E. demonstrate improved conversation skills, as well as career/major exploration.

required courses: units
CARER-130 Career and Major Exploration .................................................. 1
ESL-080 Grammar for High Intermediate ESL Students ........................................... 2
ESL-086 High Intermediate Reading Comprehension ............................................ 3
ESL-088 High Intermediate Writing Skills ............................................................ 3
ESL-090 Grammar for Advanced ESL Students ................................................... 2
ESL-096A Advanced ESL Reading and Study Skills ............................................ 3
ESL-098A Advanced ESL Writing ............................................................................ 3

Certificate of accomplishment

ESL: Transition to college-level English
Students completing the program will be able to...
A. transition into college and transfer-level English and Counseling courses.
B. improve college-level essay writing skills.
C. improve college-level critical reading skills.
D. improve college-level critical thinking skills.
E. improve language control and sentence clarity in writing by focusing on grammar in the context of their writing.
F. improve success, including possible transfer plans.

required courses: units
ESL-076 Intermediate Reading and Comprehension Skills ........................................... 3
ESL-078 Intermediate Writing Skills .............................................................................. 3
ESL-086 High Intermediate Reading Comprehension ............................................ 3
ESL-088 High Intermediate Writing Skills ............................................................ 3

Certificate of accomplishment

ESL conversation
Students completing the program will be able to...
A. demonstrate confidence and skills in English pronunciation.
B. demonstrate confidence and skills in listening to and understanding English.
C. demonstrate skills in English conversation, including a mock job interview.

required courses: units
ESL-075 Intermediate Oral Communication Skills ........ 2
ESL-085 High-Intermediate Oral Communication Skills ................................................. 2
ESL-095 Advanced Oral Communication Skills ........ 2

Certificate of accomplishment

Intermediate ESL reading and writing
Students completing the program will be able to...
A. demonstrate college-essay writing skills.
B. demonstrate college-level critical reading skills.
C. demonstrate critical thinking skills and prepare them for more advanced college-level courses.

required courses: units
ESL-076 Intermediate Reading and Comprehension Skills ........................................... 3
ESL-078 Intermediate Writing Skills .............................................................................. 3
ESL-086 High Intermediate Reading Comprehension ............................................ 3
ESL-088 High Intermediate Writing Skills ............................................................ 3

Certificate of accomplishment

Advanced ESL reading and writing
Students completing the program will be able to...
A. demonstrate advanced-level essay writing skills.
B. demonstrate advanced-level critical reading skills.
C. demonstrate advanced-level critical thinking skills.
D. demonstrate language control and sentence clarity in writing by focusing on the grammar in the context of their writing.
E. demonstrate improved conversation skills, as well as career/major exploration.

required courses: units
CARER-130 Career and Major Exploration .................................................. 1
ESL-080 Grammar for High Intermediate ESL Students ........................................... 2
ESL-086 High Intermediate Reading Comprehension ............................................ 3
ESL-088 High Intermediate Writing Skills ............................................................ 3
ESL-090 Grammar for Advanced ESL Students ................................................... 2
ESL-096A Advanced ESL Reading and Study Skills ............................................ 3
ESL-098A Advanced ESL Writing ............................................................................ 3

Certificate of accomplishment

ESL: Transition to college-level English
Students completing the program will be able to...
A. transition into college and transfer-level English and Counseling courses.
B. improve college-level essay writing skills.
C. improve college-level critical reading skills.
D. improve college-level critical thinking skills.
E. improve language control and sentence clarity in writing by focusing on grammar in the context of their writing.
F. improve success, including possible transfer plans.
required courses:

- ENGL-122* Freshman English: Composition and Reading....................................................3
- ESL-096A Advanced ESL Reading and Study Skills........3
- ESL-098A Advanced ESL Writing.............................................3

plus at least 3 units from:

- ENGL-116 College Reading Development ..................3
- ENGL-117 Integrated College Reading and Writing Development..........................5
- ENGL-118 College Writing Development..................3
- ESL-117A Integrated Reading and Writing: Advanced English Language Learners........5

plus at least 1.5 units from:

- COUNS-120 Student Success.............................................3
- COUNS-130 Transfer Planning..............................................1.5

*Prerequisite: successful completion of ENGL-116/118 or ENGL-117 or ESL-117A

| total minimum required units | 13.5 |

ESL-067 Low-Intermediate College English Skills

2 units P/NP
- Non degree applicable
- 18 hours lecture/54 hours laboratory per term

This course is designed for English learners at the low-intermediate level who need to improve their speaking, listening, reading and writing skills to prepare them for entry into more advanced courses in the ESL program. The goals of the course are to develop and improve English language skills and to introduce students to the college environment.

ESL-075 Intermediate Oral Communication Skills

2 units SC
- Non degree applicable
- 18 hours lecture/54 hours laboratory per term
- Recommended: Eligibility for ESL-067 or equivalent

This intermediate course complements the ESL reading and writing courses, ESL-076 and ESL-078, and is designed for non-native speakers of English at the Intermediate Level. The focus is on oral comprehension and increased fluency and accuracy of spoken English. The course will also present strategies for developing a self-awareness of strengths and challenges of communicating in English. Students will explore a range of topics through a variety of activities.

ESL-076 Intermediate Reading and Comprehension Skills

3 units SC
- Non degree applicable
- 54 hours lecture/18 hours laboratory per term
- Recommended: ESL-067 or placement through the ESL assessment process or equivalent

This is an intermediate-level course for English learners in reading comprehension, writing, and study skills to enhance performance in future college courses. Students will continue to develop basic reading comprehension skills such as identifying main ideas in paragraphs, understanding paragraph organization, and using context clues to understand new vocabulary.

ESL-078 Intermediate Writing Skills

3 units SC
- Non degree applicable
- 54 hours lecture/18 hours laboratory per term
- Recommended: ESL-067 or placement through the ESL assessment process or equivalent

This is an intermediate-level course for English learners in writing paragraphs and narratives to enhance performance in future college courses. Students will continue to develop skills in grammar, language usage, parts of speech, punctuation, idioms and reading short passages.

ESL-080 Grammar for High Intermediate ESL Students

2 units SC
- Non degree applicable
- 36 hours lecture per term
- Recommended: ESL-078 or equivalent

This course is supplemental to ESL-086 and ESL-088 and is designed for ESL students at the high intermediate level. After a brief review of sentence patterns, word order, simple present and present continuous verb tenses, the course covers simple past, past progressive and present perfect tenses; modal auxiliaries; and sentence types. Students will also learn methods for identifying and correcting their mistakes during the editing process.

ESL-081 Studies in Reading, Writing, and Listening/Speaking Skills

2 units SC
- Non degree applicable
- 36 hours lecture per term
- Recommended: Eligibility for ESL-086, ESL-088 or equivalents

This course is designed for ESL students to prepare them for more advanced courses in the ESL and English programs. Topics for the course may include reading comprehension, spelling, vocabulary, sentence structure, punctuation, and conversation.
# English as a second language

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>GPA</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESL-085</td>
<td>High-Intermediate Oral Communication Skills</td>
<td>2 SC</td>
<td>Non degree applicable</td>
<td>This high-intermediate course complements the ESL reading and writing courses, ESL-086 and ESL-088, and is designed for non-native speakers of English at the high-intermediate Level. Building on ESL-075, this course focuses on listening and speaking skills for academic purposes. Exploring a variety of topics, students will work on oral comprehension of lectures and presentations, note-taking, and academic discussion. This course will also present strategies for developing a self-awareness of strengths and challenges of communicating in English.</td>
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<tr>
<td>ESL-086</td>
<td>High Intermediate Reading Comprehension</td>
<td>3 SC</td>
<td>Non degree applicable</td>
<td>This high-intermediate course is for ESL students who need preparation for college-level reading and related study skills. Class activities include reading and writing about academic texts; vocabulary development; listening and note-taking practice; and academic orientation. Writing is an important part of this class because through their writing, students will show their reading comprehension and what they have learned.</td>
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<tr>
<td>ESL-088</td>
<td>High Intermediate Writing Skills</td>
<td>3 SC</td>
<td>Non degree applicable</td>
<td>This high-intermediate course is designed for ESL students who need to improve their writing skills to prepare for college-level writing and who are ready to begin writing essays. Course work will include instruction in sentence, paragraph and essay structure, principles of grammar and mechanics, identification and correction of errors; voice-audience awareness; revising and editing techniques. Writing assignments will include paragraphs and short essays. Students will demonstrate their understanding of reading assignments through writing.</td>
</tr>
<tr>
<td>ESL-090</td>
<td>Grammar for Advanced ESL Students</td>
<td>2 SC</td>
<td>Non degree applicable</td>
<td>This course is supplemental to ESL-096A and ESL-098A and is designed for ESL students at the advanced level. The course covers sentence combining, compound-complex sentences, embedded clauses, direct and indirect objects, use of gerunds and infinitives, passive voice, use of articles, and advanced editing strategies for longer essays.</td>
</tr>
<tr>
<td>ESL-091</td>
<td>Topics in Vocational English Skills</td>
<td>1 SC</td>
<td>Non degree applicable</td>
<td>This course is designed for advanced English as a Second Language students. The focus of this course will change depending on the vocational area that it serves. It will teach reading skills, vocabulary-building strategies, writing skills, listening and oral communication skills, and study skills to help students master the content and requirements of a course required for a certificate of achievement or completion.</td>
</tr>
<tr>
<td>ESL-095</td>
<td>Advanced Oral Communication Skills</td>
<td>2 SC</td>
<td>Non degree applicable</td>
<td>This advanced ESL course complements the ESL reading and writing courses, ESL-096A and ESL-098A and is designed for non-native speakers of English at the Advance Level. Building on ESL-085, this course focuses on listening and speaking skills with an emphasis on listening and speaking in academic settings. Exploring a variety of conceptually and linguistically complex topics, students will work on oral comprehension of lectures and presentations, strategies for note-taking, and academic discussions. This course will also present strategies for developing a self awareness of strengths and challenges of communicating in English.</td>
</tr>
<tr>
<td>ESL-096A</td>
<td>Advanced ESL Reading and Study Skills</td>
<td>2 SC</td>
<td>Non degree applicable</td>
<td>This course focuses on the needs of ESL students at the advanced level to develop critical reading and writing skills. Students will learn to identify themes and supporting details as well as to determine methods of organization and relationships of ideas in college-level materials. A primary aim is to increase studentsí reading fluency and to develop their ability to comprehend, interpret and write about what they read, demonstrating relative control over conventions of written English. This course will also emphasize effective college study skills and vocabulary development.</td>
</tr>
</tbody>
</table>
ESL-098A  Advanced ESL Writing
3 units  SC
- Non degree applicable
- 54 hours lecture/18 hours laboratory per term
- Recommended: ESL-086 and ESL-088 or placement through the ESL assessment process or equivalents

This course focuses on the needs of ESL students at the advanced level to help them increase their confidence and fluency in writing well-organized college essays. Following the steps of the writing process, students will compose thesis-driven essays for an academic audience, with coherent paragraphs and a variety of sentence structures. Students will read, analyze and write about a variety of short texts. Students will learn editing strategies to identify and correct common sentence level errors of advanced ESL learners, as well as errors in mechanics and usage by editing and revising their own and others’ writing.

ESL-117A  Integrated Reading and Writing: Advanced English Language Learners
5 units  SC
- 90 hours lecture per term
- Recommended: ESL-096A and ESL-098A or equivalents
- Note: This course is equivalent to the completion of ENGL-116 and ENGL-118 or ENGL-117. Only one of ENGL-116, 117, 118 or ESL-117A may be applied to the units required for the associate degree.

This course integrates the skills taught in ENGL-116 and ENGL-118 and is intended for Advanced English Language Learners who have been assessed or advised to take both courses to prepare them to take ENGL-122, transfer-level English. In this course, students will develop and improve their critical reading, writing, and thinking skills, as well as their vocabulary and study skills. Students will actively engage with their peers, studying and practicing the ways reading and writing inform each other, and learning ways to interact with, appreciate, and comprehend the texts they read. The central focus throughout the course will be on the integration and synthesis of reading and writing at the college level with explicit grammar instruction; the additional focus for English Language Learners will be on revising and editing to achieve clarity of ideas and correctness of grammar, punctuation and mechanics. CSU, UC

ENVIRONMENTAL SCIENCE - ENVSC
Tish Young, Dean
Physical Sciences and Engineering Division
Physical Sciences Building, Room 293

Possible career opportunities
Career opportunities in the field of environmental studies have grown with the increase of human population and the need to document and study the relationship between humans and nature. Environmental scientists are needed to monitor, interpret, analyze and enforce the guidelines of governmental policies. Careers include working for the government at all levels, working for companies in science and technology, as well as working in companies in energy fields. Such specialties include pollution prevention, resource conservation and environmental restoration, environmental stewardship, and newly emerging fields such as energy management technology, geospatial technology, and biodiversity preservation. Individuals studying in this field are trained to provide both public and private environmental services in a variety of settings: private business, consulting services and government agencies.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Environmental science
Students completing the program will be able to...
A. differentiate between different biotic and abiotic components of the environment.
B. explain and analyze man-made impacts on the environment.
C. apply the scientific method for environmental analysis.
D. explain, illustrate and analyze chemical bonds and reactions.
E. apply environmental science concepts and analytical procedures in various fields.

The associate in science degree in environmental science offers a distinctive program of interdisciplinary study. It is a field of inquiry exploring energy and climate systems and their complex relationships with the world’s diverse human cultures. To achieve this goal, students and faculty work together across disciplines to develop an understanding of environmental sustainability in all its dimensions. The program focuses on current environmental concerns that have far-reaching implications for the fate of human society, ecological systems, and energy diversity. This involves an integration of knowledge from a variety of disciplines to understand the function of the ecological system and human impact upon these systems at a local, regional, and global scale.
Environmental science

Students are advised that there are a wide range of environmental science areas of emphasis offered at the university level. Therefore, while choosing electives, students are advised to consult with a counselor or faculty advisor to select courses that will meet the requirements of an area of emphasis at their selected transfer institution. DVC environmental science students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.

To earn an associate in science degree, students must complete each required course with a “C” grade or higher and complete general education requirements as listed in the catalog. Degree requirements can be completed by attending classes in the day, evening, online, or a combination of those. Certain classes may satisfy both major and other general education requirements; however, the units are only counted once.

**major requirements:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOSC-170 Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-140 Introduction to Weather</td>
<td>3</td>
</tr>
<tr>
<td>GEOL-120 Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>plus at least 4 units from:</td>
<td></td>
</tr>
<tr>
<td>CHEM-108 Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM-120 General College Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>plus at least 4 units from:</td>
<td></td>
</tr>
<tr>
<td>MATH-142 Elementary Statistics with Probability</td>
<td>4</td>
</tr>
<tr>
<td>MATH-192 Analytic Geometry and Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>plus at least 9 units from:</td>
<td></td>
</tr>
<tr>
<td>ARCHI-207 Environmental Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>BIOSC-126 Ecology and Field Biology</td>
<td>4</td>
</tr>
<tr>
<td>ENGIN-130 Energy, Society, and the Environment</td>
<td>3</td>
</tr>
<tr>
<td>ENSYS-120 Introduction to Energy Systems</td>
<td>3</td>
</tr>
<tr>
<td>ENSYS-125 Building Envelope and Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-124 Thinking and Communicating Geospatially</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-125 Introduction to Geographic Information Systems (GIS)</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-129 Field Data Acquisition and Management</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-160 Introduction to Remote Sensing</td>
<td>4</td>
</tr>
<tr>
<td>PHYS-120 General College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS-121 General College Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS-130 Physics for Engineers and Scientists A: Mechanics and Wave Motion</td>
<td>4</td>
</tr>
<tr>
<td>PHYS-230 Physics for Engineers and Scientists B: Heat and Electro-Magnetism</td>
<td>4</td>
</tr>
</tbody>
</table>

**total minimum required units** 26

**ENVSC-295 Occupational Work Experience Education in ENVSC**

1-4 units  SC
- May be repeated three times
- Variable hours
- Note: In order to enroll in ENVSC-295, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

ENVSC-295 is supervised employment that extends classroom learning to the job site and relates to the student’s chosen field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Five hours work per week or seventy-five hours work per term is equal to one unit. Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

**FILM, TELEVISION, AND ELECTRONIC MEDIA – FTVE**

Toni Fannin, Interim Dean

Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

**Possible career opportunities**

Students majoring in FTVE enter broadcasting, cable, online media, and related industries. They can pursue graduate degrees in the field of mass or electronic communication for work in audio and video production, web development, radio and television, cable television, and media departments of agencies, institutions, and businesses.

**Program-level student learning outcomes**

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.
Associate in arts degree
Broadcast communication arts

Students completing the program will be able to...

A. produce for broadcast and digital distribution utilizing three-camera studio format principles (except Basic Digital Field Production and Basic Writing for Digital Medium).

B. operate cameras and professional sound equipment (except Basic Writing for Digital Medium).

C. perform digital nonlinear editing (except Basic Writing for Digital Medium).

D. produce still and motion graphics (except Basic Writing for Digital Medium).

E. produce for broadcast and digital distribution utilizing field production principles (except Basic Studio Production and Basic Writing for Digital Medium).

F. write scripts for various production formats.

G. direct projects for various production formats.

H. transfer to four-year institutions majoring in broadcast communication arts.

I. qualify for entry-level employment in broadcasting.

J. apply their planning skills for project management.

K. identify major trends in the history of broadcasting.

The associate degree program in broadcast communication arts is designed as a two year curricular pathway that offers a broad general education while preparing students for entry-level positions in the broadcast communication industries such as: associate producer, assistant director, on-camera talent, camera operator, sound technician, video switcher, floor director, videotape editor, production assistant, radio board operator, radio producer, radio production engineer, and radio on-air talent.

Students must complete each of the required courses with a “C” grade or higher. Required courses can only be completed by attending a combination of day and evening classes. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

Selected courses in the program may also meet some lower division requirements for bachelor of arts programs at certain California State University campuses. Students who intend to transfer are advised to consult with a counselor regarding specific requirements.

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major requirements units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTDM-105</td>
<td>Introduction to Digital Imaging</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-120</td>
<td>Introduction to TV Studio Production</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-130</td>
<td>Intermediate TV Studio Production</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-165</td>
<td>Digital Editing</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-240</td>
<td>History of Broadcasting and Electronic Media</td>
<td>3</td>
</tr>
</tbody>
</table>

plus at least 6 units from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTVE-140</td>
<td>Introduction to Film and Media Scriptwriting</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-160</td>
<td>Introduction to Film Production</td>
<td>3</td>
</tr>
<tr>
<td>JRNAL-110</td>
<td>Mass Media of Communication</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-115</td>
<td>Digital Interface Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-149</td>
<td>Fundamentals of Digital Video</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM-170</td>
<td>Animation and Interactivity</td>
<td>3</td>
</tr>
<tr>
<td>BUSMG-191</td>
<td>Small Business Management</td>
<td>3</td>
</tr>
<tr>
<td>BUSMG-192</td>
<td>Entrepreneurship and Venture Management</td>
<td>3</td>
</tr>
<tr>
<td>COMM-148</td>
<td>Performance of Literature</td>
<td>3</td>
</tr>
<tr>
<td>DRAA-122</td>
<td>Basic Principles of Acting</td>
<td>3</td>
</tr>
<tr>
<td>DRAA-123</td>
<td>Intermediate Principles of Acting</td>
<td>3</td>
</tr>
<tr>
<td>DRAA-124</td>
<td>Advanced Principles of Acting</td>
<td>6</td>
</tr>
<tr>
<td>DRAA-126</td>
<td>Auditioning and Preparation for the Camera</td>
<td>3</td>
</tr>
<tr>
<td>ENGR-151</td>
<td>Electronics I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL-152</td>
<td>The Short Film</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-132</td>
<td>Advanced TV Studio Production</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-140</td>
<td>Introduction to Film and Media Scriptwriting</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-150</td>
<td>Topics in Film, Television and Electronic Media</td>
<td>0.3-4</td>
</tr>
<tr>
<td>FTVE-160</td>
<td>Introduction to Film Production</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-166</td>
<td>Intermediate Digital Editing</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-205</td>
<td>Introduction to Film and Media Arts</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-280</td>
<td>American Cinema 1900-1950</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-281</td>
<td>World Cinema 1900-1960</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-282</td>
<td>American Cinema 1950 to the Present</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-283</td>
<td>World Cinema 1960 to the Present</td>
<td>3</td>
</tr>
<tr>
<td>FTVE-298</td>
<td>Independent Study</td>
<td>0.5-3</td>
</tr>
</tbody>
</table>

*Note: There may be no duplication of course units between major requirements and elective courses.
Certificate of achievement
Broadcast communication arts

Students completing the program will be able to...

A. produce for broadcast and digital distribution utilizing three-camera studio format principles (except Basic Digital Field Production and Basic Writing for Digital Medium).
B. operate cameras and professional sound equipment (except Basic Writing for Digital Medium).
C. perform digital nonlinear editing (except Basic Writing for Digital Medium).
D. produce still and motion graphics (except Basic Writing for Digital Medium).
E. produce for broadcast and digital distribution utilizing field production principles (except Basic Studio Production and Basic Writing for Digital Medium).
F. write scripts for various production formats.
G. direct projects for various production formats.
H. transfer to four-year institutions majoring in broadcast communication arts.
I. qualify for entry-level employment in broadcasting.
J. apply their planning skills for project management.
K. identify major trends in the history of broadcasting.

This program prepares students for entry-level positions in the broadcast communication industries such as, associate producer, assistant director, on-camera talent, camera operator, sound technician, video switcher, floor director, videotape editor, production assistant, radio board operator, radio producer, radio production engineer, and radio on-air talent.

Selected courses in the program may meet some lower division requirements for the bachelor of arts program at certain California State University campuses. Consult with department faculty or a college counselor for more information.

To earn a certificate of achievement, students must complete each of the required courses with a "C" grade or higher. Required courses can only be completed by attending a combination of day and evening classes.

required courses: units
ARTDM-105 Introduction to Digital Imaging 3
FTVE-120 Introduction to TV Studio Production 3
FTVE-130 Intermediate TV Studio Production 3
FTVE-165 Digital Editing 3
FTVE-240 History of Broadcasting and Electronic Media 3

plus at least 6 units from:
FTVE-140 Introduction to Film and Media Scriptwriting 3
FTVE-160 Introduction to Film Production 3
JRNAL-110 Mass Media of Communication 3

plus at least 3 units from:
FTVE-132 Advanced TV Studio Production 3
FTVE-150 Topics in Film, Television, and Electronic Media 0.3-4
FTVE-161 Intermediate Film Production 3
FTVE-166 Intermediate Digital Editing 3

plus at least 3 units from:
ARTDM-190 Digital Media Projects 3
ARTDM-195 Applied Production for Digital Media 3
FTVE-295 Occupational Work Experience Education in FTVE 1.4
FTVE-296 Internship in Occupational Work Experience Education in FTVE 1.4

plus at least 6 units from:
ARTDM-115 Digital Interface Design 3
ARTDM-149 Fundamentals of Digital Video 3
ARTDM-170 Animation and Interactivity 3
BUSMG-151 Small Business Management 3
BUSMG-152 Entrepreneurship and Venture Management 3
BUSSMK-255 Advertising 3
COMM-148 Performance of Literature 3
DRAMA-122 Basic Principles of Acting 3
DRAMA-123 Intermediate Principles of Acting 3
DRAMA-124 Advanced Principles of Acting 6
DRAMA-126 Auditioning and Preparation for the Camera 3
ELTRN-116 Electronics I 3
ENGL-151 The Short Story 3
ENGL-152 The Short Film 3
FTVE-132 Advanced TV Studio Production 3
FTVE-140 Introduction to Film and Media Scriptwriting 3
FTVE-150 Topics in Film, Television, and Electronic Media 0.3-4
FTVE-160 Introduction to Film Production 3
FTVE-161 Intermediate Film Production 3
FTVE-166 Intermediate Digital Editing 3
FTVE-205 Introduction to Film and Media Arts 3
FTVE-280 American Cinema 1900-1950 3
FTVE-281 World Cinema 1900-1960 3
FTVE-282 American Cinema 1950 to the Present 3
FTVE-283 World Cinema 1960 to the Present 3
FTVE-298 Independent Study 0.5-3

total minimum required units 33

*Note: There may be no duplication of course units between major requirements and elective courses.
Certificate of accomplishment
Broadcast communication arts -
Basic digital field production

Students completing the program will be able to...

A. operate cameras and professional sound equipment (except Basic Writing for Digital Medium).
B. perform digital nonlinear editing (except Basic Writing for Digital Medium).
C. produce still and motion graphics (except Basic Writing for Digital Medium).
D. produce for broadcast and digital distribution utilizing field production principles (except Basic Studio Production and Basic Writing for Digital Medium).
E. write scripts for various production formats.
F. direct projects for various production formats.
G. transfer to four-year institutions majoring in broadcast communication arts.
H. qualify for entry-level employment in broadcasting.
I. apply their planning skills for project management.
J. identify major trends in the history of broadcasting.

The broadcast communication arts program prepares students for entry level in one of four specialty areas of broadcasting industry; studio production, field production, post production and writing.

To earn a certificate of accomplishment, students must complete each of the required courses with a “C” grade or higher. Required courses can only be completed by attending a combination of day and evening classes.

required courses: units
FTVE-161 Intermediate Film Production.......................... 3
FTVE-165 Digital Editing.............................................. 3
FTVE-240 History of Broadcasting and Electronic Media.............................................. 3

plus at least 6 units from:
ARTDM-105 Introduction to Digital Imaging ......................... 3
ARTDM-195 Digital Media Projects.............................. 3
ARTDM-195 Applied Production for Digital Media ................. 3
FTVE-130 Topics in Film, Television, and Electronic Media.................. 0.3-4
FTVE-160 Introduction to Film Production......................... 3
FTVE-295 Occupational Work Experience Education in FTVE.................. 1-4
FTVE-296 Internship in Occupational Work Experience Education in FTVE.................. 1-4
FTVE-298 Independent Study...................................... 0.5-3

total minimum required units 15

Certificate of accomplishment
Broadcast communication arts -
Basic studio production

Students completing the program will be able to...

A. produce for broadcast and digital distribution utilizing three-camera studio format principles (except Basic Digital Field Production and Basic Writing for Digital Medium).
B. operate cameras and professional sound equipment (except Basic Writing for Digital Medium).
C. perform digital nonlinear editing (except Basic Writing for Digital Medium).
D. produce still and motion graphics (except Basic Writing for Digital Medium).
E. write scripts for various production formats.
F. direct projects for various production formats.
G. transfer to four-year institutions majoring in broadcast communication arts.
H. qualify for entry-level employment in broadcasting.
I. apply their planning skills for project management.
J. identify major trends in the history of broadcasting.

The broadcast communication arts program prepares students for entry level in one of four specialty areas of broadcasting industry; studio production, field production, post production and writing.

To earn a certificate of accomplishment, students must complete each of the required courses with a “C” grade or higher. Required courses can only be completed by attending a combination of day and evening classes.

required courses: units
FTVE-120 Introduction to TV Studio Production............. 3
FTVE-130 Intermediate TV Studio Production.................. 3
FTVE-132 Advanced TV Studio Production..................... 3
FTVE-240 History of Broadcasting and Electronic Media.............................................. 3

plus at least 3 units from:
ARTDM-105 Introduction to Digital Imaging ......................... 3
ARTDM-190 Digital Media Projects.............................. 3
ARTDM-195 Applied Production for Digital Media ................. 3
FTVE-150 Topics in Film, Television, and Electronic Media.................. 0.3-4
FTVE-295 Occupational Work Experience Education in FTVE.................. 1-4
FTVE-296 Internship in Occupational Work Experience Education in FTVE.................. 1-4
FTVE-298 Independent Study...................................... 0.5-3

total minimum required units 15
Certifcate of accomplishment
Broadcast communication arts - Basic writing for digital medium
Students completing the program will be able to...
A. write scripts for various production formats.
B. direct projects for various production formats.
C. transfer to four-year institutions majoring in broadcast communication arts.
D. qualify for entry-level employment in broadcasting.
E. apply their planning skills for project management.
F. identify major trends in the history of broadcasting.

The broadcast communication arts program prepares students for entry level in one of four specialty areas of broadcasting industry; studio production, field production, post production and writing.

To earn a certificate of accomplishment, students must complete each of the required courses with a "C" grade or higher. Required courses can only be completed by attending a combination of day and evening classes.

required courses:
FTVE-140 Introduction to Film and Media Scriptwriting... 3
FTVE-141 Intermediate Film and Media Scriptwriting... 3
FTVE-142 Advanced Film and Media Scriptwriting... 3
FTVE-240 History of Broadcasting and Electronic Media... 3

plus at least 3 units from:
COMM-148 Performance of Literature... 3
ENGL-151 The Short Story... 3
FTVE-150 Topics in Film, Television, and Electronic Media... 0.3-4
FTVE-295 Occupational Work Experience Education in FTVE... 1-4
FTVE-296 Internship in Occupational Work Experience Education in FTVE... 1-4
FTVE-298 Independent Study... 0.5-3
JRNL-110 Mass Media Communication... 3

total minimum required units 15

FTVE-120 Introduction to TV Studio Production
3 units SC
- 36 hours lecture/54 hours laboratory per term
- Prerequisite: FTVE-120 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly BCA-120

This course introduces theory, terminology and operation of a multi-camera television studio and control room. Topics include studio signal flow, directing, theory and operation of camera and audio equipment, switcher operation, fundamentals of lighting, graphics, video control and video recording and real-time video production. CSU

FTVE-130 Intermediate TV Studio Production
3 units SC
- 36 hours lecture/54 hours laboratory per term
- Prerequisite: FTVE-120 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly BCA-130

This is an intermediate class designed to advance the student's skills in producing and directing TV programs and operating television equipment. Students will produce and direct programs and prepare for positions in broadcast and cable TV as well as industrial television production facilities. CSU

FTVE-132 Advanced TV Studio Production
3 units SC
- 36 hours lecture/54 hours laboratory per term
- Prerequisite: FTVE-130 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly BCA-132

This is an advanced class designed to increase the student's skills in producing and directing TV programs and operating television equipment. Students will produce and direct programs to prepare for positions in broadcast and cable TV as well as industrial television production facilities. CSU

FTVE-140 Introduction to Film and Media Scriptwriting
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly BCA-290 and FILM-290

This is a basic introductory course in writing for the film and electronic media. Preparing scripts in proper formats, including fundamental technical, conceptual and stylistic issues related to writing fiction and non-fiction scripts for informational and entertainment purposes in film and electronic media are emphasized. A writing evaluation component is a significant part of the course requirement. CSU, UC

FTVE-141 Intermediate Film and Media Scriptwriting
3 units SC
- 54 hours lecture per term
- Prerequisite: FTVE-140 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly BCA-291

This is an intermediate film writing class. The course will focus on developing dramatic conflict inside of a three-act structure. There will be numerous writing assignments including the writing of the first-act of a feature-length screenplay. The purpose of the class is to hone and increase the student’s ability to write for a visual medium. CSU, UC
FTVE-142  Advanced Film and Media Scriptwriting
3 units  SC
- 54 hours lecture per term
- Prerequisite: FTVE-141 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly FILM-294
The purpose of this class is for the advancing student to produce a feature length screenplay. Therefore, emphasis will be placed on developing and refining authentic characters, solid stories and dramatic structure. There will be numerous writing exercises and evaluations. CSU, UC

FTVE-150  Topics in Film, Television, and Electronic Media
3-4 units  SC
- Variable hours
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly BCA-190 and FILM-150
A supplemental course in film, television, and electronic media to provide a study of current concepts and problems in film, television, and electronic media. Specific topics will be announced in the schedule of classes. CSU, UC

FTVE-160  Introduction to Film Production
3 units  SC
- 36 hours lecture/54 hours laboratory per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly BCA-125 and FILM-292
This course provides an introduction to short, single-camera digital videos focusing on the aesthetics and fundamental aspects of scripting, producing, directing on location, post-production, and exhibition/distribution. Theory, terminology, and operation of single camera video production, including composition and editing techniques, camera operation, portable lighting, video recorder operation, audio control and basic editing will also be covered. CSU, UC

FTVE-161  Intermediate Film Production
3 units  SC
- 54 hours lecture/54 hours laboratory per term
- Prerequisite: FTVE-160 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly BCA-126 and FILM-293
In this course students produce intermediate level, single-camera digital videos that utilize mixed soundtracks, sophisticated lighting schemes, sync sound, polished editing and the use of visual metaphors. CSU, UC

FTVE-165  Digital Editing
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Formerly BCA-165 and FILM-165
This course is an introduction to the techniques, concepts and aesthetics of digital non-linear, computerized editing for film, television and digital media. The student will become familiar with various professional software programs and develop an understanding of organization, timelines and story as well as editing for visual and audio effect. CSU, UC

FTVE-166  Intermediate Digital Editing
3 units  SC
- 36 hours lecture/72 hours laboratory per term
- Prerequisite: FTVE-165 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly BCA-166 and FILM-166
This intermediate course is designed to advance the student’s non-linear digital editing skills using current industry standard software programs. CSU, UC

FTVE-200  American Cinema/American Culture
3 units  SC
- 54 hours lecture per term
- Formerly FILM-140
This course presents the history of cinema focusing on various genres in American filmmaking in a larger cultural context including literature, drama, vaudeville, and related art forms. The course will investigate the interplay of economic, industrial, aesthetic, and cultural forces that shape the language of film - how film conveys meaning and functions as a work of art. Other themes to be explored include how Hollywood functions as a business, reflects societal values and concerns, and responds to evolving technology. CSU, UC

FTVE-205  Introduction to Film and Media Arts
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly FILM-180
This course will examine major trends and genres in the world of film and media. Analysis of how plot, theme and character are developed in a visual medium and how the language and syntax of film conveys meaning as compared to media, literature and drama will be emphasized. The relationship of film and media to historical, social, and cultural trends will also be examined. Topics include modes of production, narrative and non-narrative forms, visual design, editing, sound, genre, ideology and critical analysis. CSU, UC (credit limits may apply to UC - see counselor)

FTVE-210  American Ethnic Cultures in Film
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly FILM-160
This course will evaluate and explore various American cultures: African American, American Indian, Asian American, Hispanic, and European American as represented in feature film. Emphasis is on the analysis of similarities and differences, paying particular attention to social and cultural representations. In addition, the course will include issues specific to the world of cinema including how film language communicates ideas and stimulates emotional responses as well as how economic considerations influence Hollywood distribution practices. CSU, UC
Film, television, and electronic media

**FTVE-240 History of Broadcasting and Electronic Media**
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly BCA-140

This course introduces the history, structure, function, economics, content and evolution of radio, television, film, the Internet, and new media, including traditional and mature formats. The social, political, regulatory, ethical and occupational impact of the electronic media are also studied. CSU, UC

**FTVE-260 Ethnic Images in United States (U.S.) Television**
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly BCA-260

This course will evaluate and explore various cultures represented in U.S. television: African American, American Indian, Asian American, Hispanic, and European American. It will examine the demographic, racial, political, and economic factors that determine the cultural diversity of programming, and analyze similarities and differences in the way various cultures are portrayed. Issues specific to the world of television including broadcasting, cable, and streaming will be examined. The course will focus on how television communicates ideas and stimulates emotional responses, as well as the importance of Federal Communication Commission (FCC) regulations and marketing practices. CSU, UC

**FTVE-280 American Cinema 1900-1950**
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly FILM-280

This course is a survey of major trends in American Cinema from 1900 to the demise of the studio system in the 1950s. Students will view films from notable artists and movements that have influenced the development of film arts around the world. In addition, students will analyze how social, economic, and historical forces shape film art, the development of global media culture, and how cinema communicates as an art form. CSU, UC

**FTVE-281 World Cinema 1900-1960**
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly FILM-281

This course is a survey of major trends in World Cinema from 1900 to the French New Wave of the 1960s. Students will view films from notable artists and movements that have influenced the development of film arts around the world. In addition, students will analyze how social, economic, and historical forces shape film art, the development of global media culture, and how cinema communicates as an art form. CSU, UC (credit limits may apply to UC - see counselor)

**FTVE-282 American Cinema 1950 to the Present**
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly FILM-282

This course is a survey of major trends in American Cinema from the demise of the studio system in the 1950s to the present. Students will view films from notable artists and movements that have influenced the development of film arts around the world. In addition, students will analyze how social, economic, and historical forces shape film art, the development of global media culture, and how cinema communicates as an art form. CSU, UC

**FTVE-283 World Cinema 1960 to the Present**
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly FILM-283

This course provides a survey of major trends in World Cinema since 1960 from French New Wave to the growth of Asian, Latin American, and Third-World cinema. The course methodology includes lectures and the viewing of key films from notable artists and movements that have influenced the development of film arts around the world. The social, economic, and historical forces that shape film art, as well as the development of global media culture and understanding how film communicates as an art form will be stressed. CSU, UC

**FTVE-295 Occupational Work Experience Education in FTVE**
1-4 units SC
- May be repeated three times
- Variable hours
- Note: In order to enroll in FTVE-295, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

FTVE-295 is supervised employment that extends classroom learning to the job site and relates to the student’s chosen field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Five hours work per week or seventy-five hours work per term is equal to one unit. Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU
FTVE-296  Internship in Occupational Work Experience Education in FTVE
1-4 units  SC
- May be repeated three times
- Variable hours
- Note: In order to enroll in the FTVE-296 course, students must be interning or volunteering, register for the course, complete an online Employment Form, and participate in an orientation. The Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

FTVE-296 is a supervised internship in a skilled or professional level assignment in the student’s major field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

FTVE-298  Independent Study
.5-3 units SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.
- Formerly BCA-298 and FILM-298

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

FTVE-299  Student Instructional Assistant
.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
- Formerly BCA-299 and FILM-299

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

FRENCH – FRNCH

Toni Fannin, Interim Dean
Applied and Fine Arts
Business and Foreign Language Building, Room 204

Possible career opportunities
The study of French can open up opportunities in communications, foreign trade and banking, transportation, government, the Foreign Service, tourism, library services, teaching, professional translating, journalism, and all levels of education, including university teaching. Most foreign language careers require more than two years of study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts degree

French

Students completing the program will be able to...
A. comprehend a spoken dialogue in the target language.
B. identify the present, past and future tenses in a written paragraph.
C. interpret cultural behavior.

The associate in arts degree in French at DVC will provide students with skills in understanding, speaking, reading and writing French. The curriculum exposes students to French culture and civilization and provides foundational skills in language that can apply to a broad range of international and domestic career opportunities and professions. The degree will provide lower division preparation for transfer to UC, CSU and other four year colleges and universities to earn a bachelor’s degree.

The DVC French major is intended for transfer. Students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to baccalaureate-granting institutions of their choice are met. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is appropriate for those students who do not intend to transfer. Students may not take a pass/no pass option for major courses and each of the major requirements must be completed with a “C” grade or higher. Certain courses may satisfy both a major and a general education requirement; however, the units are counted only once.
French

Students must complete at least 20 units from the list of core courses. The core courses provide students with the essential grammar of the language, culture and basic literature of the Francophone world. Students who have no prior knowledge of French will complete the first four courses in the list for a total of 20 units. Students with prior knowledge of French may start at the second term level and take fifth and sixth terms to achieve a total of 21 units.

<table>
<thead>
<tr>
<th>course</th>
<th>units</th>
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<tbody>
<tr>
<td>FRNCH-120 First Term French</td>
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</tr>
<tr>
<td>FRNCH-121 Second Term French</td>
<td>5</td>
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<tr>
<td>FRNCH-220 Third Term French</td>
<td>5</td>
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<tr>
<td>FRNCH-221 Fourth Term French</td>
<td>5</td>
</tr>
<tr>
<td>FRNCH-230 Fifth Term French</td>
<td>3</td>
</tr>
<tr>
<td>FRNCH-231 Sixth Term French</td>
<td>3</td>
</tr>
</tbody>
</table>

Certificate of achievement French

Students completing the program will be able to...

A. comprehend a spoken dialogue in the target language.
B. identify the present, past and future tenses in a written paragraph.
C. interpret cultural behavior.

This certificate of achievement was created to give students the opportunity to show potential employers in this country and in other countries that the student has completed a certain number of courses in French and prepares students with an intermediate to advanced knowledge of French and familiarizes them with the culture of the Francophone world. This certificate of achievement provides students, prospective employers and others with documented evidence of persistence and academic accomplishment in the language. The certificate requires completion of at least 13 units from one of the following lists of courses. Students may not take a credit/no credit option for required courses and each course must be completed with a “C” grade or higher.

<table>
<thead>
<tr>
<th>List A</th>
<th>units</th>
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<tbody>
<tr>
<td>FRNCH-120 First Term French</td>
<td>5</td>
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<tr>
<td>FRNCH-121 Second Term French</td>
<td>5</td>
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<tr>
<td>FRNCH-220 Third Term French</td>
<td>5</td>
</tr>
<tr>
<td>FRNCH-221 Fourth Term French</td>
<td>5</td>
</tr>
<tr>
<td>FRNCH-230 Fifth Term French</td>
<td>3</td>
</tr>
<tr>
<td>FRNCH-231 Sixth Term French</td>
<td>3</td>
</tr>
</tbody>
</table>

| total minimum required units | 20 |

<table>
<thead>
<tr>
<th>List B</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRNCH-121 Second Term French</td>
<td>5</td>
</tr>
<tr>
<td>FRNCH-155 First Term Conversational French</td>
<td>3</td>
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<tr>
<td>FRNCH-156 Second Term Conversational French</td>
<td>3</td>
</tr>
<tr>
<td>FRNCH-157 Third Term Conversational French</td>
<td>3</td>
</tr>
<tr>
<td>FRNCH-220 Third Term French</td>
<td>5</td>
</tr>
<tr>
<td>FRNCH-221 Fourth Term French</td>
<td>5</td>
</tr>
</tbody>
</table>

| total minimum required units | 13 |

FRNCH-120 First Term French
5 units SC
- 90 hours lecture per term
- Note: This course is equivalent to two years of high school study.

This is a basic course in understanding, speaking, reading, and writing French. There is extensive utilization of cultural material and information. CSU, UC

FRNCH-121 Second Term French
5 units SC
- 90 hours lecture per term
- Prerequisite: FRNCH-120 or two years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

A second term basic course at a more advanced level in understanding, speaking, reading, and writing French. Cultural material and information will also be covered. CSU, UC

FRNCH-150 Topics in French
3-4 units SC
- Variable hours

A supplemental course in French to provide a study of current concepts and problems in French and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

FRNCH-155 First Term Conversational French
3 units SC
- 54 hours lecture per term
- Note: This course does not satisfy major or general education requirements.

This is the first term of the conversational French series. Basic grammar and vocabulary as well as an introduction to French culture will also be covered. CSU

FRNCH-156 Second Term Conversational French
3 units SC
- 54 hours lecture per term
- Recommended: FRNCH-155 or equivalent
- Note: This course does not satisfy major or general education requirements.

This is the second term of the conversational French series. Emphasis will be placed on more advanced grammar and vocabulary to expand beyond the self to conversations of a more general nature. Comprehension will be reinforced through listening practice. CSU
FRNCH-157 Third Term Conversational French
3 units SC
• 54 hours lecture per term
• Recommended: FRNCH-156 or equivalent
• Note: This course does not satisfy the academic requirements of the FRNCH-120-121 series

This is a third term conversational French course designed to improve and refine speaking, listening, and comprehensive skills by reviewing and introducing target vocabulary and grammar. Students will be able to discuss topics of social, political, and cultural nature. Students will also have the opportunity to present a well-researched expose on various aspects of French culture. CSU

FRNCH-220 Third Term French
5 units SC
• 90 hours lecture per term
• Prerequisite: FRNCH-121 or three years of high school study or equivalent
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

In this course, students develop a functional fluency in understanding, speaking, reading and writing French, as well as providing an introduction to the study of French literature. This is a further study and interpretation of foreign culture. CSU, UC

FRNCH-221 Fourth Term French
5 units SC
• 90 hours lecture per term
• Prerequisite: FRNCH-220 or four years of high school study or equivalent
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

Students will learn advanced grammar. Study of francophone literature in French with emphasis on the short story and poetry. Cultural study integrated into class discussions. Class conducted in French. CSU, UC

FRNCH-230 Fifth Term French
3 units SC
• 54 hours lecture per term
• Prerequisite: FRNCH-221 or equivalent
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

Students will further development of their language skills through student preparation and presentation of reports through intensive studies of literary works. This course is conducted entirely in French. (This is a continuation of FRNCH 221.) CSU, UC

FRNCH-231 Sixth Term French
3 units SC
• 54 hours lecture per term
• Prerequisite: FRNCH-230 or equivalent
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is a continuation of FRNCH 230 with intensive study of additional literary works. There is further development of language skills through student preparation and presentation of reports. This course is conducted entirely in French. CSU, UC

FRNCH-298 Independent Study
.5-3 units SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

FRNCH-299 Student Instructional Assistant
.5-3 units SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
Geography

**GEOGRAPHY – GEOG**

Tish Young, Dean
Physical Sciences and Engineering Division
Physical Sciences Building, Room 263

**Possible career opportunities**

Geography is an interdisciplinary study focusing on the spatial relations of physical, cultural and economic systems of our world. As such, geographers are employed in a wide array of fields in many capacities such as: city/county planning; surveying; cartography; aerial photographic interpretation; remote sensing; environmental studies; meteorology; GIS (geographic information systems); and GPS (global positioning systems). Geographers are employed by private sector firms, government and non-profit organizations. Many career options may require more than two years of college study.

Cultural geography careers include geography education at many levels, analyst, consultant and planner. Most career options require more than two years of college study.

**Program-level student learning outcomes**

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

**Associate in arts degree**

**Social/cultural geography**

Students completing the program will be able to...

A. describe the spatial organization of the world’s peoples, nations, cultural environments.

B. compare and contrast the levels of economic development and their underlying environmental and cultural factors.

C. demonstrate a global view with appreciation for diverse cultures and societies.

The social-cultural geography major at Diablo Valley College offers students the opportunity to prepare for a broad range of professions through the study of the spatial distribution of languages, religions and other aspects of human culture. Students will be prepared to transfer to UC, CSU and other four-year colleges and universities to earn a Bachelor’s degree. DVC prepares students to pursue careers in government, business, international relations, and education.

The DVC social-cultural geography major consists of 18 units of required courses in which students develop an understanding of the origin, diffusion and spatial distribution of various attributes of human culture.

The DVC social-cultural geography major is intended for transfer. Students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is not generally advised.

To earn an associate in arts degree with a major in social-cultural geography, students must complete each course used to meet a major requirement with a “C” grade or higher, maintain an overall GPA of 2.5 or higher in the coursework required for the major, and complete general education requirements as listed in the catalog. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

**major requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHR-130</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-120</td>
<td>Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-130</td>
<td>Cultural Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-135</td>
<td>World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-162</td>
<td>Map Design and Visualization</td>
<td>3</td>
</tr>
<tr>
<td>SOCIO-131</td>
<td>The Urban Community</td>
<td>3</td>
</tr>
</tbody>
</table>

**total minimum required units** 18

**Associate in arts in geography for transfer**

Students completing the program will be able to...

A. describe the various components of the geosystems and explain how they interact.

B. explain the interaction between physical and human components of the environment and how the nature of interaction varies in different parts of the world.

C. describe the role and significance of geospatial techniques in assessing and mapping the physical and cultural environments.

D. describe the characteristics of different cultural realms and demonstrate a respect for diversity that exists between and among cultural realms.

The associate in arts in geography for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE) or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.
Some courses in the major satisfy both major and CSU GE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate's degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

**major requirements:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>GEOG-120 Physical Geography</td>
<td>3</td>
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<tr>
<td>GEOG-121 Physical Geography Laboratory</td>
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<tr>
<td>GEOG-130 Cultural Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-162 Map Design and Visualization</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-160 Introduction to Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-295 Thinking and Communicating Geospatially</td>
<td>3</td>
</tr>
<tr>
<td>ANTHR-130 Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL-120 Physical Geology</td>
<td>3</td>
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<tr>
<td>COMSC-255 Programming with Java</td>
<td>4</td>
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<tr>
<td>COMSC-172 UNIX and Linux Administration</td>
<td>2</td>
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<tr>
<td>COMSC-120 SQL Programming</td>
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<tr>
<td>COMSC-110 Introduction to Programming</td>
<td>4</td>
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<td>COMSC-101 Computer Literacy</td>
<td>4</td>
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<tr>
<td>BIOSC-128 Ecology and Field Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOSC-170 Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>ENGT-126 Computer Aided Design and Drafting - AutoCAD</td>
<td>3</td>
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<tr>
<td>ENGT-124 Thinking and Communicating Geospatially</td>
<td>3</td>
</tr>
<tr>
<td>ENGT-125 Introduction to Archeological Field Methods</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-129 Field Data Acquisition and Management</td>
<td>3</td>
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<tr>
<td>GEOG-162 Advanced Geographic Information Systems</td>
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</tr>
<tr>
<td>GEOG-160 Introduction to Remote Sensing</td>
<td>4</td>
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<tr>
<td>GEOG-129 Field Data Acquisition and Management</td>
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<tr>
<td>GEOG-162 Map Design and Visualization</td>
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<td>BIOSC-128 Ecology and Field Biology</td>
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</tr>
<tr>
<td>BIOSC-170 Environmental Science</td>
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<td>ENGT-126 Computer Aided Design and Drafting - AutoCAD</td>
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<tr>
<td>ENGT-124 Thinking and Communicating Geospatially</td>
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<tr>
<td>ENGT-125 Introduction to Archeological Field Methods</td>
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<td>GEOG-129 Field Data Acquisition and Management</td>
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<td>GEOG-129 Field Data Acquisition and Management</td>
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<tr>
<td>ENGT-125 Introduction to Archeological Field Methods</td>
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</table>

**total minimum required units** 19

**Associate in science degree**

**Geographic information systems/Global positioning system**

Students completing the program will be able to...

A. analyze the inter-disciplinary applications of GIS, GPS, and remote sensing.

B. synthesize data from various sources and different formats for spatial analyses.

C. apply spatial tools and techniques in a research or work environment.

The associate in science degree program in geographic information systems (GIS)/global positioning system (GPS) is designed to prepare students for entry into careers that employ generalized or specialized applications of GIS. GIS is a versatile and powerful technology that allows data input, data management, analysis, and display of result within a single setup. Most local, state, and federal government agencies use GIS, as do businesses, planners, architects, foresters, geologists and a host of other occupations. Students learn technical and analytical skills for research as well as practical skills necessary to enter the job market and obtain positions with such titles as GIS technician, GIS specialist, GIS analyst, GIS programmer, GIS coordinator, GIS supervisor and GIS manager. To earn a degree, students must complete each course used to meet a major requirement with a “C” grade or higher and complete general education requirements as listed in the catalog. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

**Meteorology**

Students completing the program will be able to...

A. describe the structure and properties of the atmosphere and atmospheric circulation systems.

B. develop and explain a forecast in the short to medium time range.

C. demonstrate the ability to apply atmospheric studies to interdisciplinary and practical applications for commercial and public needs.

The meteorology major at Diablo Valley College offers students the opportunity to prepare for a range of professions through the study of meteorology as an applied science. Students will be prepared to transfer to UC, CSU and other four-year colleges and universities to earn a baccalaureate degree. DVC prepares students to pursue careers in government, private forecasting and broadcast meteorology.

The DVC meteorology major consists of 18 units of required core courses through which students develop an understanding of the atmosphere, the physical principles governing weather, the spatial distribution of weather and how the atmosphere links to other components of earth’s physical environment.
Geography

The DVC meteorology major is intended for transfer. Students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is not generally advised.

To earn an associate in science degree with a major in meteorology, students must complete each course used to meet a major requirement with a “C” grade or higher, maintain an overall GPA of 2.5 or higher in the coursework required for the major, and complete general education requirements as listed in the catalog. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

major requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<td>Physical Geography</td>
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<td>GEOG-121</td>
<td>Physical Geography Laboratory</td>
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<td>GEOG-135</td>
<td>World Regional Geography</td>
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<td>GEOG-140</td>
<td>Introduction to Weather</td>
<td>3</td>
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<td>GEOG-141</td>
<td>Introduction to Weather Laboratory</td>
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<tr>
<td>GEOG-162</td>
<td>Map Design and Visualization</td>
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<tr>
<td>PHYS-120</td>
<td>General College Physics I</td>
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<td>total minimum required units</td>
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Certificate of achievement

Geographic information systems/
Global positioning system

Students completing the program will be able to...

A. analyze the inter-disciplinary applications of GIS, GPS, and remote sensing.
B. apply spatial tools and techniques in a research or work environment.
C. synthesize data from various sources and different formats for spatial analyses.

The geographic information systems (GIS)/global positioning system (GPS) program is designed to prepare students for entry into careers that employ generalized or specialized applications of GIS. GIS is a versatile and powerful technology that allows data input, data management, analysis and display of result within a single setup. Most local, state, and federal government agencies use GIS, as do businesses, planners, architects, foresters, geologists and a host of other occupations. Students learn technical and analytical skills for research as well as practical skills necessary to enter the job market and obtain positions with such titles as GIS technician, GIS specialist, GIS analyst, GIS programmer, GIS coordinator, GIS supervisor and GIS manager.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available in the evening and during the day.
required courses:  
GEOG-125 Introduction to Geographic Information Systems (GIS).............................. 3
GEOG-126 Advanced Geographic Information Systems................................................. 3
GEOG-129 Field Data Acquisition and Management.................................................... 3
GEOG-160 Introduction to Remote Sensing............................................................... 4
GEOG-162 Map Design and Visualization................................................................. 3

plus at least 6 units from:
COMSC-101 Computer Literacy.................................................................................. 4
COMSC-110 Introduction to Programming............................................................. 4
COMSC-120 SQL Programming.................................................................................. 4
COMSC-138 Advanced Microsoft Office Using Visual Basic for Applications (VBA)...... 2
COMSC-172 UNIX and Linux Administration.......................................................... 2
COMSC-255 Programming with Java........................................................................ 4

plus at least 6 units from:
ANTHR-126 Introduction to Archeological Field Methods....................................... 3
BIOSC-126 Ecology and Field Biology....................................................................... 4
BIOSC-170 Environmental Science.......................................................................... 3
ENGT-126 Computer Aided Design and Drafting - AutoCAD..................................... 3
GEOG-120 Physical Geography................................................................................ 3
GEOG-124 Thinking and Communicating Geospatially........................................... 3
GEOG-295 Occupational Work Experience Education in GEOG.......................... 1-4
GEOG-122 Physical Geography Laboratory............................................................. 1

total minimum required units 12

Certificate of accomplishment
Geographic information systems/Global positioning system

Students completing the program will be able to:

A. analyze the inter-disciplinary applications of GIS, GPS, and remote sensing;
B. synthesize data from various sources and different formats for spatial analyses;
C. apply spatial tools and techniques in a research or work environment.

The geographic information systems (GIS)/global positioning system (GPS) program is designed to prepare students for entry into careers that employ generalized or specialized applications of GIS. GIS is a versatile and powerful technology that allows data input, data management, analysis and display of result within a single setup. Most local, state, and federal government agencies use GIS, as do businesses, planners, architects, foresters, geologists and a host of other occupations. Students learn technical and analytical skills for research as well as practical skills necessary to enter the job market and obtain positions with such titles as GIS technician, GIS specialist, GIS analyst, GIS programmer, GIS coordinator, GIS supervisor and GIS manager.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available in the evening and during the day.

required courses:  
GEOG-125 Introduction to Geographic Information Systems (GIS).............................. 3
GEOG-126 Advanced Geographic Information Systems................................................. 3
GEOG-129 Field Data Acquisition and Management.................................................... 3

plus at least 3 units from:
ANTHR-126 Introduction to Archeological Field Methods....................................... 3
BIOSC-126 Ecology and Field Biology....................................................................... 4
BIOSC-170 Environmental Science.......................................................................... 3
COMSC-120 SQL Programming.................................................................................. 4
ENGT-126 Computer Aided Design and Drafting - AutoCAD..................................... 3
GEOG-120 Physical Geography................................................................................ 3
GEOG-121 Physical Geography Laboratory............................................................. 1
GEOG-124 Thinking and Communicating Geospatially........................................... 3
GEOG-160 Introduction to Remote Sensing............................................................... 4
GEOG-162 Map Design and Visualization................................................................. 3
GEOG-295 Occupational Work Experience Education in GEOG.......................... 1-4
GEOG-298 Independent Study................................................................................... 0.5-3
GEOG-122 Physical Geography Laboratory............................................................. 1

total minimum required units 28

GEOG-120 Physical Geography
3 units  SC
- 54 hours lecture per term
- Recommended: MATH-090 or MATH-090E or MATH-090SP or one year of high school algebra or equivalent

A general course to introduce the fundamental principles of physical geography. This course is intended to provide an intelligent understanding of the Earth as the home of human beings and to show the interrelationships found within the physical environment. Quantitative reasoning, development of mathematical concepts and problem solving are emphasized. C-ID GEOG 110, CSU, UC

GEOG-121 Physical Geography Laboratory
1 unit  SC
- 54 hours laboratory per term
- Prerequisite: GEOG-120 or equivalent (may be taken concurrently)
- Note: Field trips may be included in the course

A laboratory course to supplement GEOG-120-Physical Geography. Emphasis will be placed on using the skills and tools of modern physical geography and analyzing and interpreting geographic data. Topics include maps, aerial photographs, satellite images, weather instruments and computer analysis. C-ID GEOG 111, CSU, UC
GEOG-124  Thinking and Communicating Geospatially
3 units  SC
- 54 hours lecture per term
This course is a survey of geographic information technologies including GIS (Geographic Information Systems), GPS (Global Positioning System), RS (Remote Sensing), maps and cartography, mobile and online mapping and an overview of how these technologies are utilized by various agencies, industries, and disciplines for resource management, problem solving, and decision making. CSU, UC

GEOG-125  Introduction to Geographic Information Systems (GIS)
3 units  SC
- 54 hours lecture/18 hours laboratory per term
- Recommended: COMSC-101 or equivalent
This course provides an introduction to Geographic Information Systems (GIS) as a tool for spatial analysis. GIS concepts, techniques and methodologies are covered and laboratory activities are used to reinforce lecture concepts. The course provides preparation for advanced university level courses in spatial analysis or for entry level positions in GIS-related fields. C-ID GEOG 155, CSU, UC

GEOG-126  Advanced Geographic Information Systems
3 units  SC
- 54 hours lecture/18 hours laboratory per term
- Prerequisite: GEOG-125 or equivalent
This course is an application of advanced analytical techniques of geographic information systems (GIS) to manipulate, analyze and predict spatial patterns. Students will work on individual projects to learn the issues involved in managing and representing spatial information. CSU

GEOG-129  Field Data Acquisition and Management
3 units  SC
- 54 hours lecture per term
- Recommended: GEOG-124 or equivalent
This course covers the fundamentals of the Global Navigation Satellite System (GNSS) using the Global Positioning System (GPS), for data acquisition, management, and integration of data with Geographic Information Systems (GIS). Students will learn to design, implement, manage a field project, and export the information to a compatible GIS platform for advanced analyses. CSU

GEOG-130  Cultural Geography
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course examines the nature and causes of the spatial distribution of human activity. Phenomena such as population, language, religion, popular culture, agricultural practices, political structure, economic organization, settlement patterns, resource exploration, and technological innovation are examined in order to understand the interactive relationship between human beings and their environment. C-ID GEOG 120, CSU, UC

GEOG-135  World Regional Geography
3 units  SC
- 54 hours lecture per term
This course is a geographic perspective of physical, cultural, political and economic characteristics of countries and regions of the world. Topics include a general survey of world place locations, influence of geographic factors on international cooperation and conflict, and a survey of the transformation of the cultural landscape of the United States. C-ID GEOG 125, CSU, UC

GEOG-140  Introduction to Weather
3 units  SC
- 54 hours lecture per term
- Recommended: MATH-090 or equivalent
This introductory course in meteorology is both a descriptive and analytical course on the physical principles affecting the earth's weather. Topics covered include the nature of the atmosphere, solar energy, heat, temperature, pressure, stability, moisture, wind, storms, severe weather and forecasting. Climatology as a scientific study and the Earth's climatic history are introduced. The course will examine current research in climate modeling and global climate change. C-ID GEOG 130, CSU, UC

GEOG-141  Introduction to Weather Laboratory
1 unit  SC
- 54 hours laboratory per term
- Co-requisite: GEOG-140 or equivalent (may be taken previously)
- Recommended: MATH-090 or equivalent
This laboratory course is a supplement to GEOG-140. It includes coverage of fundamental concepts in meteorology and measurement techniques including selected mathematical concepts used to develop an understanding of weather and climate. Analysis of real-time weather data will be stressed. CSU, UC

GEOG-150  Topics in Geography
.3-4 units  LR
- Variable hours
A supplemental course in geography to provide a study of current concepts and problems in geography. Specific topics will be announced in the schedule of classes. CSU
GEOG-160  Introduction to Remote Sensing
3 units  SC
- 36 hours lecture/54 hours laboratory per term
- Recommended: COMSC-101 or equivalent
This course introduces the basic principles of remote sensing techniques, including aerial photographs, satellite and LIDAR images. We teach techniques to collect data about the earth, how to interpret such data and how to map with the help of image processing software and geographic information systems. CSU, UC

GEOG-162  Map Design and Visualization
3 units  SC
- 36 hours lecture/54 hours laboratory per term
- Recommended: MATH-090 or MATH-090SP or MATH-090E or equivalent
This course introduces basic principles of mapping and representation of spatial data using conventional and computerized cartographic techniques and is designed to develop a better understanding of maps, map design, and map-interpretation. Elements of map such as scale, distance, direction, and map projections as well as cartographic techniques of data analysis, processing, visualization, and representation are examined in detail. CSU, UC

GEOG-295  Occupational Work Experience
Education in GEOG
1-4 units  SC
- May be repeated three times
- Variable hours
- Note: In order to enroll in GEOG-295, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.
GEOG-295 is supervised employment that extends classroom learning to the job site and relates to the studentís chosen field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Five hours work per week or seventy-five hours work per term is equal to one unit. Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

GEOG-298  Independent Study
.5-3 units  SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

GEOG-299  Student Instructional Assistant
.5-3 units  SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

GEOLOGY – GEOL
Tish Young, Dean
Physical Sciences and Engineering Division
Physical Sciences Building, Room 263

Possible career opportunities
Geologists work in exploration for oil, natural gas, coal and uranium for energy, and for metals used in everyday life. They search for clean sources of groundwater for drinking and agriculture (hydrology). They seek to understand geologic hazards and how to mitigate them (seismology, flood and landslide control, and volcanology). They work to monitor and clean up pollutants in soil, groundwater and surface water. Currently, the best employment opportunities are in hydrology and pollution control. Many career options may require more than two years of college study.

Program-level student learning outcomes

Associate in science degree
Geology
Students completing the program will be able to...
A. identify, describe, and classify earth materials, formations, and structures and interpret them in terms of geologic processes.
B. synthesize information from a variety of physical science disciplines to solve geologic problems.
C. develop and demonstrate analytical and critical thinking skills required for transfer into a four-year geologic science program.
The geology major at Diablo Valley College (DVC) prepares students to transfer to a University of California, California State University, or other baccalaureate-granting college or university to earn a bachelor’s degree in geology or other earth science.

The geology major at DVC consists of at least 38 units of study, including 8 units of geology where students will learn the fundamentals of geologic science and gain hands-on experience in geology laboratories. In addition, students will complete a year of calculus courses, a year of chemistry courses, and a year of physics courses that are typically required for a bachelor’s degree at baccalaureate-granting institutions. A list of electives including courses such as California Geology, Maps and Cartography, or Introduction to Field Geology allows the student to explore specific fields of greater interest.

The DVC geology major is intended for transfer. Students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to baccalaureate-granting institutions of their choice are met. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is not generally advised.

To earn an associate in science degree with a major in geology, students must complete each course used to meet a major requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the major. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

**Group 1: Core geology courses**

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<th>Course</th>
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<tr>
<td>GEOL-124</td>
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**Group 2: Core mathematics courses**

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<td>MATH-292</td>
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**Group 3: Core chemistry courses**

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<td>CHEM-121</td>
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**Group 4: Core physics courses**

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**Group 5: Electives**

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**Total minimum required units**: 36

### Associate in science in geology for transfer

Students completing the program will be able to...

A. identify, describe, and classify earth materials, formations, and structures and interpret them in terms of geologic processes.

B. synthesize information from a variety of physical science disciplines to solve geologic problems.

C. develop and demonstrate analytical and critical thinking skills required for transfer into a four-year geologic science program.

The associate in science in geology for transfer at Diablo Valley College (DVC) prepares students to transfer to a California State University (CSU) or other four-year college or university to earn a bachelor’s degree in geology, geological science, or similarly named earth science field. In addition, the course work prepares students for a wide range of professional opportunities across many scientific disciplines.

The associate in science in geology for transfer consists of 28 units of study, including eight units of geology where students will learn the fundamentals of geologic science and gain hands-on experience in geology laboratories. In addition, students will complete a year of calculus courses and a year of chemistry courses. Though not specifically required by this transfer major, it is highly recommended that students also take a year of physics courses that are typically required for a bachelor’s degree at four-year institutions.

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In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

The associate in science in geology for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.
Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor's degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSU GE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate's degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

**major requirements: units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
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<td>Earth and Life Through Time</td>
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<td>GEOL-122</td>
<td>Physical Geology Laboratory</td>
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<td>GEOL-124</td>
<td>Earth and Life Through Time Laboratory</td>
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<tr>
<td>MATH 193</td>
<td>Analytic Geometry and Calculus II</td>
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</table>

**total minimum required units**

28

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**GEOL-120 Physical Geology**

3 units SC

- 54 hours lecture per term
- Recommended: MATH-090 or MATH-090E or MATH-090SP or one year of high school algebra and eligibility for ENGL-122 or equivalents

This is a general course in geologic science that encompasses nearly all phases of geology. Students will gain an appreciation and understanding of the fundamental processes that have changed, and are presently changing, the Earth's crust. The recognition of common minerals, rocks and landscape features of the Earth will be included. Students will practice quantitative reasoning and mathematical concepts. C-ID GEOL 100, CSU, UC

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**GEOL-121 Earth and Life Through Time**

3 units LR

- 54 hours lecture per term
- Recommended: GEOL-120 or equivalent and GEOL-122 or equivalent

This course covers the history of the Earth from its beginning to the present. Topics included are the origin of the Earth, the development of plant and animal life and the physical changes in the Earth that have led to the features that are observed today. C-ID GEOL 110, CSU, UC

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**GEOL-122 Physical Geology Laboratory**

1 unit SC

- 54 hours laboratory per term
- Co-requisite: GEOL-120 (may be taken previously) or equivalent
- Recommended: MATH-090 or MATH-090E or MATH-090SP or one year of high school algebra or equivalent
- Note: Field trips may be included in the course

This course is the laboratory component to Physical Geology (GEOL-120). Topics include the description and identification of minerals and all types of rocks, studies of topographic and geologic maps, as well as the internal structure of the earth using cross-sections. Laboratory studies of earthquakes, tectonic activity, and surficial features of the earth are included. C-ID GEOL 100L, CSU, UC

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**GEOL-124 Earth and Life Through Time Laboratory**

1 unit LR

- 54 hours laboratory per term
- Prerequisite: GEOL-121 or equivalent (may be taken concurrently)

This is a laboratory course on the techniques of historical geological investigations. Topics will include geologic dating, plate tectonics, stratigraphy, fossils, biological evolution, the planet's origin and the processes that have influenced paleogeography during the past 4.6 billion years. Individual laboratories will also include identification and interpretation of the basic rocks and minerals that make up the earth, as well as recognition and classification of the common types of fossils. C-ID GEOL 110L, CSU, UC

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**GEOL-125 Geology of California**

3 units SC

- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course is designed to familiarize students with the varied geological, topographical and geographical aspects of California. This will include a general study of the provinces of California, the major rock types and their occurrence, the major earthquake faults and their frequency of activity, the general geologic history. Mineral and petroleum resources of the state will be discussed. C-ID GEOL 200, CSU, UC

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**GEOL-130 Earth Science**

4 units LR

- 54 hours lecture/54 hours laboratory per term
- Recommended: MATH-090 or MATH-090E or MATH-090SP or one year of high school algebra and eligibility for ENGL-122 or equivalents

This course introduces the essentials of earth science including the geosphere, atmosphere, hydrosphere, and solar system. The interactions between physical and chemical systems of the Earth such as the tectonic cycle, rock cycle, hydrologic cycle, weather and climate are explored. C-ID GEOL 121, CSU, UC
**GEOL-135  Introduction to Field Geology**  
2 units LR  
- 18 hours lecture/54 hours laboratory per term  
- Prerequisite: GEOL-120 and GEOL-122 or equivalents  
- Note: Field trips are definitely required. Most trips are to local parks or open spaces and students are responsible for their own transportation to and from these required components.

A course in general field methods of geologic science. The course is designed to provide students with the basic skills required to collect geologic data in the field and the skills necessary for constructing simple geologic maps. Types of fieldwork will include compass and orienteering work, measurement of rock features and descriptions of outcrops, as well as identification and mapping of geologic contacts. Geologic field work can be strenuous; students should expect to walk off trail over rough terrain carrying their own equipment. We will work through rain or shine; only seriously inclement weather will suspend work. CSU, UC

**GEOL-298  Independent Study**  
.5-3 units SC  
- Variable hours  
- Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

**GEOL-299  Student Instructional Assistant**  
.5-3 units SC  
- Variable hours  
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

**GERMAN – GRMAN**

Toni Fannin, Interim Dean  
Applied and Fine Arts Division  
Business and Foreign Language Building, Room 204

**Possible career opportunities**

The study of German can open up opportunities in communications, foreign trade and banking, transportation, government, the Foreign Service, tourism, library services, teaching, professional translating, journalism, and all levels of education, including university teaching. Most foreign language careers require more than two years of study.

**Program learning outcomes**

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

**Certificate of achievement**

**German**

Students completing the program will be able to...

A. comprehend a spoken dialogue in the target language.  
B. identify the present, past and future tenses in a written paragraph.  
C. interpret cultural behavior.

This certificate of achievement was created to give students the opportunity to show potential employers in this country and in other countries that the student has completed a certain number of courses in German and prepares students with an intermediate to advanced knowledge of German and familiarizes them with the culture of the German-speaking world.

This certificate of achievement provides students, prospective employers and others with documented evidence of persistence and academic accomplishment in the language. The certificate requires completion of at least 13 units from the following list of courses. Students may not take a credit/no credit option for required courses and each course must be completed with a “C” grade or higher.

**complete at least 13 units from:**  

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>GRMAN-120</td>
<td>5</td>
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<tr>
<td>GRMAN-121</td>
<td>5</td>
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<tr>
<td>GRMAN-220</td>
<td>5</td>
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<tr>
<td>GRMAN-221</td>
<td>5</td>
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<tr>
<td>GRMAN-230</td>
<td>3</td>
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<tr>
<td>GRMAN-231</td>
<td>3</td>
</tr>
</tbody>
</table>

**total minimum required units** 13
**GRMAN-120  First Term German**  
5 units  SC  
• 90 hours lecture per term  
• Note: This course is equivalent to two years of high school study.

This is a basic course in communication skills, vocabulary, idioms, and grammatical structures. A new and exciting video program augments the course and provides cultural background for the German-speaking countries. Audio tapes further expose the student to everyday spoken German and provide an opportunity to practice the language. CSU, UC

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**GRMAN-121  Second Term German**  
5 units  SC  
• 90 hours lecture per term  
• Prerequisite: GRMAN-120 or two years of high school study or equivalent  
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

A second term course in German with emphasis on communicative skills including vocabulary expansion, idioms, writing, and completion of a basic grammar overview. Study of culture, history, and geography of the German-speaking countries through the Focus Deutsch video and audio program. CSU, UC

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**GRMAN-150  Topics in German**  
.3-.4 units  SC  
• Variable hours

A supplemental course in German to provide a study of current concepts and problems in German and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

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**GRMAN-220  Third Term German**  
5 units  SC  
• 90 hours lecture per term  
• Prerequisite: GRMAN-121 or three years of high school study or equivalent  
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is a course in intermediate German. Students will expand conversation skills with emphasis on speaking more fluently and with assurance. A grammar review and development of reading and writing skills will also be presented. Short stories, video, and audio programs provide a rich basis for conversation, discussion, and cultural insights. CSU, UC

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**GRMAN-221  Fourth Term German**  
5 units  SC  
• 90 hours lecture per term  
• Prerequisite: GRMAN-220 or four years of high school study or equivalent  
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This intermediate course is a continuation of GRMAN-220 and includes completion of a grammar review and exposure to the finer points of the language, such as particles and when and how to use indirect discourse. The video program exposes the student to many aspects of life in Austria, Germany, and Switzerland, including the various accents of the native speakers. CSU, UC

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**GRMAN-230  Fifth Term German**  
3 units  SC  
• 54 hours lecture per term  
• Prerequisite: GRMAN-221 or equivalent  
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

Students refine their knowledge of advanced German and their insights into the culture of the German speaking countries through contemporary literature, popular writings, such as magazines, advertisements, videos, and film. Many group activities and projects, with an emphasis on communicative skills. CSU, UC

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**GRMAN-231  Sixth Term German**  
3 units  SC  
• 54 hours lecture per term  
• Prerequisite: GRMAN-230 or equivalent  
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This course is an intensive study of selected literary works (prose, poetry, drama) from the German-speaking countries with an emphasis on the language and the content of the readings. Different writing styles and oral communication, such as debates, oratory, jokes, and storytelling are explored. CSU, UC

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**GRMAN-299  Student Instructional Assistant**  
.5-.3 units  SC  
• Variable hours  
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
HEALTH SCIENCE – HSCI

Diablo Valley College is approved by the California Board of Registered Nurses for continuing education credits (provider #CEP 7992). Health Science courses that can be used are HSCI-124, 140, 164 and 170.

Tish Young, Dean
Biological and Health Sciences Division
Physical Sciences Building, Room 263

Possible career opportunities
A health science graduate may work in federal, state or county health agencies, community clinics, voluntary health agencies and hospitals, insurance or pharmaceutical companies.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Health education

Students completing the program will be able to...
A. apply a multi-dimensional approach to health that incorporates the study of social, behavioral and physiological sciences.
B. identify risk factors for disease and disability.
C. analyze the psychological, physical, social, sexual, and environmental influences on health and wellness.
D. demonstrate behavior-changing techniques to maximize health and wellness.
E. evaluate information and its sources by articulating and applying fundamental evaluation and selection criteria.

The associate in science degree in health education exposes the student to a multi-dimensional approach to health by incorporating the study of social, behavioral and physiological sciences. Students will learn about individual and social-cultural risk factors for disease and disability and be taught behavior-changing skills and public health strategies to improve quality and quantity of life, all of which have broad applications in fields that teach health education such as academic, community, corporate, and/or medical. The course of study also provides a broad foundation in health sciences for those students who want to pursue specialized occupations in the public health profession.

Students may apply the knowledge to work areas, such as workplace wellness, hospital health education center, state or university health center, health club, and/or government and public health agencies that focus on improving individual and societal health. Students wishing to pursue a career in the field of health education should consider this two-year program as it satisfies the general education and/or elective requirements necessary to transfer, and will prepare students for a bachelor’s of science (B.S.) degree program in the field of public health science.

DVC health education students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.

To earn an associate in science degree with a major in health education, students must complete each course used to meet a major requirement with a "C" grade or higher and complete general education requirements as listed in the catalog. Degree requirements can be completed by attending classes in the day, the evening, or both. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

major requirements:            units
HSCI-124 Health and Wellness...............   3
HSCI-130 Introduction to Public Health ........  3

plus at least 4 units from:
BIOSC-102 Fundamentals of Biological Science with Laboratory .........................   4
BIOSC-117 Human Biology with Laboratory ....................................................   4
BIOSC-119 Fundamentals of Microbiology .....................................................   4
BIOSC-139 Human Anatomy .................................................................   5
BIOSC-140 Human Physiology ..............................................................   5
BIOSC-146 Principles of Microbiology ....................................................   5

plus at least 3 units from:
HSCI-127 Drugs, Health and Society ..................   3
HSCI-135 Health and Social Justice ..................   3
HSCI-140 Human Sexuality ..................   3
HSCI-164 Health and Healing Systems: Cross-Cultural Perspectives ..................   3
HSCI-170 Women’s Health ..................   3
HSCI-298 Independent Study ..................   3
NUTRI-160 Nutrition: Science and Applications ..................   3

plus at least 6 units from any course not used above, or:
BUS-240 Business Statistics ..................   3
or
MATH-142 Elementary Statistics with Probability ..................   4
CHEM-108 Introduction to Chemistry ..................   4
PSYCH-101 Introduction to Psychology ..................   3
or
SOCIO-120 Introduction to Sociology ..................   3

total minimum required units          19
HSCI-100 Introduction to Health Care Careers
3 units SC
• 54 hours lecture per term
This course provides an overview of health care careers and their respective career paths, educational and skill requirements and professional responsibilities. Basic skills required by health-related careers such as emphasizing personal attributes, demonstrating professionalism, engaging in teamwork, and building communication skills will be covered. This course is designed to assist students in making educational and career decisions for a wide spectrum of health care occupations. CSU

HSCI-124 Health and Wellness
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: The nutrition, tobacco and substance abuse components of this course fulfill a portion of the state health education requirements for a teaching credential. For CPR training see HSCI-131.
This course focuses on the exploration of major health issues and behaviors in the various dimensions of health. Emphasis is placed on individual responsibility for personal health and the promotion of informed, positive health behaviors. Topics include (but not limited to) nutrition, exercise, weight control, mental health, stress management, violence, substance abuse, reproductive health, disease prevention, aging, healthcare, and environmental hazards and safety. C-ID PHS 100, CSU, UC (credit limits may apply to UC - see counselor)

HSCI-125 Consumer Health
3 units SC
• 54 hours lecture per term
• Recommended: ENGL-116/118 or equivalent
This course is designed to examine consumer aspects of health and medical care in contemporary society. Course study will include topics such as evaluating health care delivery systems, health care providers, and health insurance plans. Students will also learn how to critically assess health information and health-related services and products, as well as where to obtain health information, services and products. CSU

HSCI-126 Stress Management and Health
3 units SC
• 54 hours lecture per term
• Recommended: ENGL-116/118 or equivalent
This course will examine the theoretical frameworks of stress research and common stress management techniques. Topics of study will include defining stress, understanding physiological theories of stress, defining sources and causes of stress, and examining health consequences of chronic stress. Students will examine and analyze numerous strategies to manage and cope with stress such as: time management, relaxation techniques, communication skills, diet and exercise. CSU

HSCI-127 Drugs, Health and Society
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-116/118 or equivalent
This course introduces concepts, theories, epidemiology and toxicology of substance abuse and its relevance to personal and public health. The biological, psychological and social effects of drug use on the health of individuals and on society is emphasized. Students will be introduced to concepts such as substance use versus misuse, abuse and dependence, and will learn about the risk factors, signs and symptoms, mental illnesses, treatments and prevention theories associated with addiction. The pharmacological classification of psychoactive substances, illicit and licit, and their neurological and physiological effects on the human brain will be explored. An extensive analysis of health statistics identifying trends of usage, dependency, and the controversies around the social, political, and economic factors related to the legal and illegal distribution, marketing and government regulation of drugs is also covered. Current options for recovery and local resources will be reviewed. C-ID PHS 103, CSU, UC (credit limits may apply to UC - see counselor)

HSCI-128 Medical Terminology
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents terminology relevant to many allied health care fields. The construction, pronunciation, spelling, definition and common usage for all medical terms in anatomy, physiology, pathology and health care will be covered. CSU

HSCI-130 Introduction to Public Health
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course provides an introduction to the discipline of public health. Students will gain an understanding of the basic concepts and terminologies of public health, and the history and accomplishments of public health officials and agencies. An overview of the functions of various public health professions and institutions, and an in-depth examination of the core public health disciplines is covered. Topics of the discipline include the epidemiology of infectious and chronic disease; prevention and control of diseases in the community including the analysis of the social determinants of health and strategies for eliminating disease, illness and health disparities among various populations; community organizing and health promotion programming; environmental health and safety; global health; and healthcare policy and management. C-ID PHS 101, CSU, UC
Health science

HSCI-131 Cardiopulmonary Resuscitation (CPR)

.5 unit SC
- 9 hours lecture/3 hours laboratory per term
- Recommended: ENGL-116/118 or equivalent

This course is designed to teach lifesaving skills to be used in respiratory and cardiac emergencies and to recertify those with CPR already. CSU

HSCI-135 Health and Social Justice

3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course provides an introduction to the health inequities in the United States that stem from unequal living conditions. Students will explore how education, socioeconomic status, racism and gender shape health epidemics and policy development. Fundamental theories to advocate for health and social justice will be presented. C-ID PHS 102, CSU, UC

HSCI-140 Human Sexuality

3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This is an introductory course examining human sexuality from a biological and cross-cultural perspective. Historical and traditional influences, as well as current perspectives will be presented. This course will facilitate students' knowledge of each other's cultures and traditions as they relate to sexuality. Topics that will be examined include sexual anatomy and physiology, gender issues, sex research, relationships and intimacy, communication, sexual behaviors, sexual orientation, sexual minorities, contraception, abortion, sexually transmitted diseases, and enhancing sexual fulfillment. C-ID PSY 130, CSU, UC

HSCI-150 Topics in Health Science

3-4 units SC
- Variable hours
- Recommended: Eligibility for ENGL-122 or equivalent

A supplemental course in health science to provide a study of current concepts and problems in health science. Specific topics will be announced in the schedule of classes. CSU

HSCI-164 Health and Healing Systems: Cross-Cultural Perspectives

3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Continuing Education Units (CEUs) for nurses

This course examines health, disease, healing and medicine from an interdisciplinary perspective. Concepts and philosophies from traditional cultural healing systems and contemporary Western medicine will be examined from psychological, sociological, biological, historical and cultural perspectives. Topics covered include the history of Western medical thought, principles of indigenous healing systems, the role of gender in healing, the effects of personality and emotions on health and disease, and integrative medicine. CSU, UC

HSCI-170 Women's Health

3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

An exploration of the biological, sociopolitical, and psychological aspects of women's health and medical care in contemporary society. The course examines contemporary issues of women's health with emphasis on the politicization of the social, physical, emotional, intellectual, and environmental components of health. CSU, UC (credit limits may apply to UC - see counselor)

HSCI-230 Advanced First Aid/CPR

3 units SC
- 54 hours lecture per term
- Note: Continuing Education Units (CEUs) for nurses

This advanced course involves the theory and detailed demonstration of the first aid care of the injured. The student will learn to assess a victim's condition and incorporate proper treatment. Standard first aid, cardio-pulmonary resuscitation (CPR), and automatic external defibrillator (AED) certification(s) will be granted upon successful completion of requirements. This course is appropriate training for medical professionals. C-ID KIN 101, CSU, UC

HSCI-296 Internship in Occupational Work Experience Education in HSCI

1-4 units SC
- May be repeated three times
- Variable hours
- Note: In order to enroll in the HSCI-296 course, students must be interning or volunteering, register for the course, complete an online Employment Form, and participate in an orientation. The Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

HSCI-296 is a supervised internship in a skilled or professional level assignment in the student's major field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU
HSCI-298  Independent Study  
.5-3 units SC  
• Variable hours  
• Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

HSCI-299  Student Instructional Assistant  
.5-3 units SC  
• Variable hours  
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

HEATING, VENTILATION, AIR CONDITIONING, REFRIGERATION - HVACR

Tish Young, Dean  
Physical Sciences and Engineering Division  
Physical Sciences Building, Room 263

Possible career opportunities

Upon successful completion of the Heating Ventilation Air Conditioning and Refrigeration (HVACR) program, students will have the necessary knowledge and skills for a career in residential, commercial, or industrial HVACR, including careers as Heating and Air Conditioning Mechanics and Installers and as Refrigeration Mechanics and Installers. Program content includes an introduction to the electrical and mechanical principles used in air conditioning and refrigeration, including meters, circuits, contactors, relays, thermostats, pressure switches, motors, overloads, controls, and boilers. Reading and drawing of schematic diagrams, troubleshooting, and safe electrical practices are also covered.

Program-level student learning outcomes

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree

Heating, ventilation, air conditioning, and refrigeration (HVACR)

Students completing the program will be able to:

A. analyze the electrical parts of the refrigeration system.
B. differentiate between many types of motor.
C. distinguish between mechanical and electrical controls.
D. demonstrate basic control design that have applications to the HVACR industry.
E. identify the different types of controllers for the HVACR industry.
F. use oral and written communication skills in the HVACR industry.

In collaboration with Plumbers-Steamfitters-Refrigeration Union Local 342 www.ua342.org, DVC currently offers three five-year apprenticeship programs: sheetmetal, plumbing, and HVACR. Apprenticeship is training that is designed to prepare an individual for a career in the skilled crafts and trades. Apprentices develop technical skills, experience the sharing of assignments and see how technical tasks relate specifically with theoretical knowledge and interpretation. Apprentices earn a wage while learning. Enrollment in this program is restricted. You must be registered as an apprentice with the State of California to participate in the program and accepted into the apprenticeship program by our union partners.

While completing their HVACR apprenticeship, DVC students can earn awards at three levels of completion: a certificate of accomplishment, a certificate of achievement, and an associate in science degree. To earn an associate in science degree with a major in HVACR, students must complete 20 out of 31 core courses to meet their individual educational and career goals. In addition they must complete 18 general education units. Students must complete each course used to meet a major requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the major.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>HVACR-110</td>
<td>Beginning Electrical Theory</td>
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<tr>
<td>HVACR-111</td>
<td>Mechanical Refrigeration Theory</td>
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<tr>
<td>HVACR-112</td>
<td>Advanced Electrical Theory/Beginning Schematics</td>
<td>1.5</td>
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<tr>
<td>HVACR-113</td>
<td>The Refrigeration Cycle</td>
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<tr>
<td>HVACR-114</td>
<td>Intermediate Electrical I</td>
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<tr>
<td>HVACR-115</td>
<td>Intermediate Mechanical Refrigeration I</td>
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<tr>
<td>HVACR-116</td>
<td>Intermediate Electrical II</td>
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<td>HVACR-117</td>
<td>Intermediate Mechanical Refrigeration II</td>
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<tr>
<td>HVACR-118</td>
<td>Electrical Troubleshooting I</td>
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<td>HVACR-119</td>
<td>Electrical Troubleshooting II</td>
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<tr>
<td>HVACR-120</td>
<td>Introduction to Direct Digital Controls</td>
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<td>HVACR-121</td>
<td>Introduction to Variable Frequency Drives</td>
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<td>HVACR-122</td>
<td>Introduction to Market Refrigeration Systems</td>
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<td>HVACR-123</td>
<td>Introduction to Pneumatic Controls</td>
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<td>HVACR-124</td>
<td>Introduction to Boilers</td>
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<tr>
<td>HVACR-125</td>
<td>Advanced Compressor and Motor Theory</td>
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<tr>
<td>HVACR-126</td>
<td>Start Test Balance: Water Side I</td>
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<tr>
<td>HVACR-127</td>
<td>Start Test Balance: Air Side I</td>
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<td>HVACR-128</td>
<td>Start Test Balance: Water Side II</td>
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<tr>
<td>HVACR-129</td>
<td>Start Test Balance: Air Side II</td>
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</tr>
</tbody>
</table>

Total minimum required units 30
Certificate of achievement

Heating, ventilation, air conditioning and refrigeration (HVACR)

Students completing the program will be able to...

A. compare a number of basic principles and laws of electricity as they relate to in AC refrigeration.
B. analyze the electrical parts of the refrigeration system.
C. differentiate between many types of motor.
D. distinguish between mechanical and electrical controls.
E. demonstrate basic control design that have applications to the HVACR industry.
F. identify the different types of controllers for the HVACR industry.

In collaboration with Plumbers-Steamfitters-Refrigeration Union Local 342 www.ua342.org, DVC currently offers three five-year apprenticeship programs: steamfitting, plumbing, and HVACR. Apprenticeship is training that is designed to prepare an individual for a career in the skilled crafts and trades. Apprentices develop technical skills, experience the sharing of assignments and see how technical tasks relate specifically with theoretical knowledge and interpretation. Apprentices earn a wage while learning. Enrollment in this program is restricted. You must be registered as an apprentice with the State of California to participate in the program and accepted into the apprenticeship program by our union partners.

While completing their HVACR apprenticeship, DVC students can earn awards at three levels of completion: a certificate of accomplishment, a certificate of achievement, and an associate in science degree. To earn a certificate of accomplishment, students must complete at least 7.5 units from the required courses. Students must complete each course used to meet a major requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the certificate. The courses required for the certificate of accomplishment also meet some of the requirements of the major for the associate in science degree.

<table>
<thead>
<tr>
<th>required courses:</th>
<th>units</th>
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<tbody>
<tr>
<td>HVACR-110 Advanced Electrical Theory/Beginning Schematics</td>
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</tr>
<tr>
<td>HVACR-113 The Refrigeration Cycle</td>
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<tr>
<td>HVACR-114 Intermediate Electrical I</td>
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<tr>
<td>HVACR-115 Intermediate Mechanical Refrigeration I</td>
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<td>HVACR-120 Introduction to Direct Digital Controls</td>
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<td>HVACR-121 Introduction to Variable Frequency Drives</td>
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<td>HVACR-129 Start Test Balance: Air Side II</td>
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total minimum required units 21
HVACR-110  Beginning Electrical Theory  
1.5 units LR  
• 18 hours lecture/36 hours laboratory per term  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course introduces concepts of electrical principles used in air conditioning and refrigeration. Topics include meters, circuits, contactors, relays, thermostats, pressure switches, motors, overloads, circuitry and troubleshooting. This course will also cover safety as it pertains to the Heating Ventilation Air Conditioning and Refrigeration (HVACR) industry.

HVACR-111  Mechanical Refrigeration Theory  
1.5 units LR  
• 18 hours lecture/36 hours laboratory per term  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course is a study in the design, assembly and operation of compression systems to include basic liquid and vapor control, metering devices, design and construction of system piping including techniques of leak detection, dehydration of systems, charging methods, recovery and troubleshooting. In addition, safety, torch techniques, cutting, fitting and brazing of various copper projects will be explored. Further, the techniques for isometric drawing and pipe symbols for soldering and brazing will be practiced.

HVACR-112  Advanced Electrical Theory/Beginning Schematics  
1.5 units LR  
• 18 hours lecture/36 hours laboratory per term  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course continues to explore concepts of electrical principles used in air conditioning and refrigeration including installation of heating, cooling, and refrigeration systems; basic electric motors and their components; contactors, relays, and overloads; thermostats, pressure switches, and other electric control devices; heating control devices; and troubleshooting.

HVACR-113  The Refrigeration Cycle  
1.5 units LR  
• 18 hours lecture/36 hours laboratory per term  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course covers the design, assembly and operation of compression systems to include charging, recovery, recycling and reclamation, installation, heat pumps, part load, and troubleshooting.

HVACR-114  Intermediate Electrical I  
1.5 units LR  
• 18 hours lecture/36 hours laboratory per term  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

A sequential approach to exploring basic series and parallel circuits related to air conditioning (AC) and refrigeration. Motors, relays, contactors, thermostats, pressure switches and overloads are examined and wired. The concluding projects are basic AC and refrigeration systems. Special emphasis will be placed on electrical circuits diagnosis and troubleshooting.

HVACR-115  Intermediate Mechanical Refrigeration I  
1.5 units LR  
• 18 hours lecture/36 hours laboratory per term  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course covers components and applications of refrigeration systems; electric, gas, oil, and alternative (stoves, fireplace inserts, and solar) heating; indoor air quality, comfort and psychometrics; and refrigeration applied to air conditioning.

HVACR-116  Intermediate Electrical II  
1.5 units LR  
• 18 hours lecture/36 hours laboratory per term  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

A sequential approach to exploring basic series and parallel circuits related to air conditioning (AC) and refrigeration. Motors, relays, contactors, thermostats, pressure switches and overloads are examined and wired. The concluding projects are basic AC and Refrigeration systems. Special emphasis will be placed on electrical circuits diagnosis and troubleshooting.
HVACR-117 Intermediate Mechanical Refrigeration II

1.5 units LR

• 18 hours lecture/36 hours laboratory per term

Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

Continues topics in heating, air conditioning, and refrigeration including gas controls, gas ignition systems, safety and operating controls, gas furnace installation practices, ventilation and combustion air, and gas furnace troubleshooting.

HVACR-118 Electrical Troubleshooting I

1.5 units LR

• 18 hours lecture/36 hours laboratory per term

Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course will cover advanced electrical controls with special emphasis on troubleshooting and repair. Topics include proportional controls, economizers and variable air volume (VAV) controls. Motor starting techniques will be discussed including variable frequency drives (VFDs) with safety procedures being stressed.

HVACR-119 Electrical Troubleshooting II

1.5 units LR

• 18 hours lecture/36 hours laboratory per term

Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course covers additional topics in advanced electrical controls with special emphasis on troubleshooting and repair. Covered will be proportional controls, economizers and VAV controls. Motor starting techniques will be discussed including Variable Frequency Drives with safety procedures being stressed.

HVACR-120 Introduction to Direct Digital Controls

1.5 units LR

• 18 hours lecture/36 hours laboratory per term

Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course will cover direct digital controls (DDC) as they apply to the air conditioning and refrigeration industry. Topics include transmitters, sensors, power supplies and controllers. The course includes hands-on wiring testing and programming of typical components found in the industry. The student will learn techniques for troubleshooting and diagnosing hardware and software problems with DDC systems. Students will also be introduced to basic programming languages to better understand the internal operation of the system.

HVACR-121 Introduction to Variable Frequency Drives

1.5 units LR

• 18 hours lecture/36 hours laboratory per term

Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

Introduction to variable frequency drives (VFDs), applications of use, and limited troubleshooting. Parameterization for start up, open loop, closed loop, floating point, and preset speed profiles will be covered.

HVACR-122 Introduction to Market Refrigeration Systems

1.5 units LR

• 18 hours lecture/36 hours laboratory per term

Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course covers the most common refrigeration equipment such as cases, defrost methods, timers, control devices, on float systems, and heat reclaim controls. Typical market systems will be explored. Also, reading floor plans, refrigeration schedules and piping diagrams in conjunction with laying out undergrounds and overheads in a typical market will be discussed. Understanding all aspects of component operation and location including compressors, evaporators, condensers, refrigerated cases, walk-ins, heat reclaim, and connecting paraphernalia, i.e. valves, driers, etc. will be covered.

HVACR-123 Introduction to Pneumatic Controls

1.5 units LR

• 18 hours lecture/36 hours laboratory per term

Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course will investigate and recognize the operation of direct and reverse acting controls, air compressors, sizing of valves and dampers, thermostats, auxiliary devices, transmitters and receiver controllers. This sequential pattern is reinforced with various laboratory experiments.
HVACR-124 Introduction to Boilers
1.5 units LR
- 18 hours lecture/36 hours laboratory per term
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course covers the components and operation of boiler systems used in hotels, apartment buildings, schools, and other large institutions. Students will be prepared for licensing examinations. A comprehensive overview of the safe and efficient operation of high pressure boilers and related equipment is also provided, including the latest combustion control technology, as well as EPA regulations and their implications.

HVACR-125 Advanced Compressor and Motor Theory
1.5 units LR
- 18 hours lecture/36 hours laboratory per term
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

The course will include reciprocating compressor disassembly and assembly while developing a working knowledge of compressor function, troubleshooting, alignment, and performance. Unloaders, oils, starters and start-up procedures will be explored. Prominent Trane and Carrier compressors will be examined.

HVACR-126 Start Test Balance: Water Side I
1.5 units LR
- 18 hours lecture/36 hours laboratory per term
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course introduces proper procedures for start, test, and balance of air conditioning systems utilizing basic principles of air and water flow and will be explored. Refrigerant pipe sizing will be explored through the use of excerpts from Trane's Refrigeration Manual and Carrier's System Design Manual. The benefits of psychrometrics on human comfort through an understanding of temperature, humidity, and air movement will be examined through the use of the psychrometric diagram and course handouts. Other topics explored are fan laws, air movement, pumps, piping, and water measurement.

HVACR-127 Start Test Balance: Air Side I
1.5 units LR
- 18 hours lecture/36 hours laboratory per term
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course provides an overview of commercial air conditioning systems currently in use today and the methods to service them. System operation, direct expansion (DX) and chiller systems, pumps, boiler controls and related systems will be covered. The use and application of heat load equations, charts and procedures as related to commercial and residential buildings is introduced.

HVACR-128 Start Test Balance: Water Side II
1.5 units LR
- 18 hours lecture/36 hours laboratory per term
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

Proper procedures for start, test, and balance of air conditioning systems utilizing basic principles of air and water flow will be explored. Refrigerant pipe sizing will be explored through the use of excerpts from Trane's Refrigeration Manual and Carrier's System Design Manual. The benefits of psychrometrics on human comfort through an understanding of temperature, humidity, and air movement will be examined through the use of the psychrometric diagram and course handouts. Other topics explored are fan laws, air movement, pumps, piping, and water measurement.

HVACR-129 Start Test Balance: Air Side II
1.5 units LR
- 18 hours lecture/36 hours laboratory per term
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course provides a continued study of commercial air conditioning systems and the methods to service them. Air distribution and heat flow are emphasized. Students will investigate air measurement and air distribution of duct design in commercial and residential buildings.

HISTORY – HIST

Obed Vazquez, Dean
Social Sciences Division
Faculty Office Building, Room 136

Possible career opportunities
The study of history contributes to cultural literacy, developing critical thinking and other useful skills for a broad range of careers, including education, public service and law. Most career options require more than two years of college study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.
History

Associate in arts in history for transfer

Students completing the program will be able to...

A. understand and value the importance of diverse perspectives in history.
B. analyze the causes and the effects of historical events.
C. apply critical thinking strategies to better understand and explain why historical events occurred and how those events affected various populations.
D. evaluate, using critical thinking strategies, how interpretations of historical events can be disputed.

The associate in arts in history for transfer is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

• Complete 60 semester CSU-transferable units.
• Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
• Complete a minimum of 18 semester units in the major.
• Obtain a minimum grade point average (GPA) of 2.0.
• Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSU GE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

major requirements: units
HIST-120 History of the United States before 1865 .......... 3
HIST-121 History of the United States after 1865 .......... 3

plus at least 3 units from:
HIST-140 History of Western Civilization to the Renaissance......................... 3
HIST-180 World History to 1500 .................................. 3

HIST-122 Critical Reasoning in History .................. 3
HIST-142 Contemporary European History .................. 3

plus at least 3 units from:
HIST-124 History of California .................................. 3
HIST-125 History of the United States: A Mexican American Perspective.................. 3
HIST-126 The American West .................................. 3
HIST-127 African American Perspective History of the US to 1865 .................. 3
HIST-128 African American Perspective History of the US after 1865 .................. 3
HIST-129 History of Asians and Pacific Islanders in the United States ................ 3
HIST-135 History of Latin America: The Colonial Period ................ 3
HIST-136 History of Latin America: The National Period ............. 3
HIST-150 History of East Asia (to 1600) .................. 3
HIST-151 History of East Asia (from 1600 to Present) .......... 3
HIST-170 History of Women in the United States before 1877 ............. 3
HIST-171 History of Women in the United States after 1865 ........ 3

plus at least 3 units from:
HIST-130 Social Change and Revolution ................ 3
HIST-139 American, European, and Global Perspectives ........ 3
HIST-140 History of Western Civilization to the Renaissance......................... 3
HIST-180 World History to 1500 .................................. 3

HIST-120 History of the United States before 1865
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course presents a multicultural history of the United States before 1865. Students will explore social, political, cultural and economic experiences and contributions of African American, Asian American, European American, Latino/a American, and Native American men and women in the development of United States society. The origins, nature, and impact of the U.S. Constitution on United States history before 1865 including the political philosophies of the framers, the operation of political institutions, and the rights and obligations of citizens will also be covered. C-ID HIST 130, CSU, UC

HIST-121 History of the United States after 1865
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course presents a multicultural history of the United States from 1865 to present. Students will explore social, political, cultural, and economic factors in the development of United States’ society. Topics will include the operation and the continuing evolution of local, state and federal governments under the U.S. and California constitutions and the experiences of groups from diverse backgrounds such as European Americans, Asian Americans, African Americans, Native Americans and Latino/a Americans. The growing international role of the United States from the late nineteenth century to the present will also be examined. C-ID HIST 140, CSU, UC
HIST-122  Critical Reasoning in History
3 units  SC
• 54 hours lecture per term
• Prerequisite: ENGL-122 or equivalent
Critical reasoning in history is a process of questioning, analyzing, and evaluating oral and written ideas, concepts, and interpretation of the past. This process will include an introduction to the principles of inductive and deductive reasoning. The goal is to learn how to identify historical viewpoints, gather and organize historical information, recognize historical relationships and patterns, and see the relevancy of historical insights as background for an understanding of current events and issues. To achieve this goal, critical reasoning in history involves an understanding and practice of certain definable skills. CSU, UC

HIST-124  History of California
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
The course is a survey of the history of California, including the culture of the native Indian people and the Hispanic and early American settlement of California. The course also covers the California constitution, the formation and growth of state and local government, the social, political, economic and cultural forces in the growth of modern California with special emphasis on the state’s ethnic diversity. CSU, UC

HIST-125  History of the United States: A Mexican American Perspective
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents an overview of United States (U.S.) history from 1848 to the present with an emphasis on the role of peoples of Mexican-origin – both immigrants and U.S. born. History from social, political, economic, and cultural perspectives will be examined. The contributions of Mexican-origin people to the multicultural development of contemporary American society, including their interaction with other Latino communities, as well as people of European, African, Asian, and Native descent are emphasized. The impact of U.S. attitudes and policies on peoples of Mexican-origin will also be addressed. CSU, UC

HIST-126  The American West
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course surveys the movement of the American people from the Atlantic seaboard across North America and into the Pacific, including the history of western half of the current United States of America. Focusing on the Westward Movement during the nineteenth century, this course examines the historical experience from a social, political, economic, and cultural perspective into the present. The role of the diverse ethnic and racial communities of the West and their interaction with one another, their contributions to the construction of the American national character, and the experience of the West as a moving borderland with other nations, societies and cultures will also be emphasized. CSU, UC

HIST-127  African American Perspective History of the US to 1865
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents a survey of the history of the United States from the perspective of African Americans and compares the African experience with the experiences of Europeans, Native Americans, Asian Americans and Latinos. Early African presence in the Americas, the trade in African slaves, and explore political, economic, demographic and cultural influences shaping African American life and culture prior to 1865 will be examined. The U.S. government and the Constitution, the California government and Constitution, and other constitutional models for comparison and contrast will also be covered. CSU, UC

HIST-128  African American Perspective History of the US after 1865
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents a survey of the history of the United States from the perspective of African Americans and compares the African American experience with that of Native peoples, Europeans, Asian Americans and Hispanics/Latinos after 1865. The course explores the economic, cultural, institutional, political history of African Americans from the post-Civil War period to the present. The African American relationship with national, California state and local governments will also be covered. CSU, UC
HIST-129  History of Asians and Pacific Islanders in the United States
3 units  SC  
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course provides a comparative analysis of Asian American History from 1848 to the present. Topics include an exploration of Asian American perspectives; immigration and settlement patterns; labor, legal, political and social history. A comparative historical approach, placing Asian immigration within the context of global interdependence and inequality, frames the course materials. This course will examine migration theories and patterns, the politics and policies of U.S. immigration, resettlement patterns, and the reconstruction of identities and social networks. The three periods of Asian Immigration: Before World War II; during and after World War II and the Cold War; and after 1965 to the present will be explored. CSU, UC

HIST-135  History of Latin America - The Colonial Period
3 units  SC  
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course introduces the student to the history of colonial Latin America from 1492 through the European conquest, the creation of new empires, and the subsequent fall of the latter in the first two decades of the 19th century. The course explores the connections of past and present in the Latin American world including early Latin American history from pre-Columbian indigenous cultures through the early-nineteenth century independence movements. The course examines how geography, the encounter between pre-Columbian cultures and Spanish/Portuguese colonialism, the introduction of African slavery, and the movements for independence shaped Latin America and its inhabitants. CSU, UC

HIST-136  History of Latin America - The National Period
3 units  SC  
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course surveys the history of Latin America during the National Period (from independence to the present), considering the legacies of conquest and 300 years of Spanish colonialism. Latin American political, economic, social and cultural development during the nineteenth and twentieth centuries is examined using specific countries and regions as case studies. The course explores how geography, the encounter between pre-Columbian cultures and Spanish/Portuguese colonialism, the introduction of African slavery, and the movements for independence shaped Latin America and its inhabitants. CSU, UC

HIST-140  History of Western Civilization to the Renaissance
3 units  SC  
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
The growth of western civilization to the 17th century. Emphasis is upon developing an understanding of modern civilization by tracing political, economic, social, cultural, and intellectual developments and relationships of the past. C-ID HIST 170, CSU, UC

HIST-141  History of Western Civilization since the Renaissance
3 units  SC  
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course presents the history of western civilization from the 17th century to the present time. Emphasis will be placed on how the structures and outlook of modern civilization emerged, by tracing political, economic, social, cultural, and intellectual developments from late medieval to contemporary times. The development of modern Europe will also be explored. C-ID HIST 180, CSU, UC

HIST-142  Contemporary European History
3 units  SC  
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course is a study of political, social, economic and cultural developments in recent European history from the late 19th century to the present. Students will examine the influence of Europe in international events in recent history. Emphasis is placed on the impact of ideologies, the origins of wars, the ongoing effects of conflict, and progress toward coexistence. The impact of United States foreign policy in twentieth century Europe will be explored, as will the important process of decolonization and the European Union. CSU, UC

HIST-150  History of East Asia (to 1600)
3 units  SC  
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
History of East Asia, with emphasis on China and Japan, from pre-historical times to the beginning of the 17th century. CSU, UC

HIST-151  History of East Asia (from 1600 - Present)
3 units  SC  
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
History of East Asia, with emphasis on China and Japan, from the 17th century to the present. The history of Korea and Vietnam will also be considered. CSU, UC
HIST-155  Topics in History  
3-4 units  SC  
- Variable hours  
A supplemental course in history to provide a study of current concepts and problems in history and related substantive areas. Specific topics will be announced in the schedule of classes. CSU

HIST-170  History of Women in the United States before 1877  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course is a survey of United States history before 1877, with an emphasis on women's life experiences within the context of broader historical change. We will examine the commonalities of women's experiences and explore the impacts of race, law, ethnicity, class, and region on women's lives. This course also explores how women both fostered and were affected by social, political, economic, legal and cultural transformations in the United States. The impact of the U.S. and California Constitutions on women's life experiences and the activities of federal, state, and local governments will also be assessed. CSU, UC

HIST-171  History of Women in the United States after 1865  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course is a survey of United States history, after 1865 to present, emphasizing women's life experiences within the context of larger historical changes. Students will examine the commonalities of women's experiences and explore the impacts of race, class, gender and region on women's lives. This course will explore how women fostered and were affected by social, political, economic, and cultural transformations in the United States. The impact of the U.S. and California Constitutions and the activities of federal, state, and local governments on the experiences of women will also be covered. CSU, UC

HIST-180  World History to 1500  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course presents a survey of world history that emphasizes the dynamic interaction of cultures and peoples and the broad patterns of global history to 1500. The roles of social, political, economic, cultural, and intellectual forces as they shape the major world civilizations will be presented. The legacy of these civilizations and their contributions to present cultures will also be emphasized. C-ID HIST 150, CSU, UC

HIST-181  World History since 1500  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course surveys world history from 1500 to the present, with an emphasis on the dynamic interaction of cultures and peoples around the globe. Emphasis will be placed on the social, political, economic, cultural, and intellectual forces that shaped the major world societies in recent centuries and their impact worldwide. The legacy of these forces worldwide and their contributions to present-day problems, including on-going tensions between tradition and modernity will be discussed. The course covers major regions of the world including Asia, Africa, Europe, the Middle East, North and South America, and interactions between these regions since 1500, emphasizing belief systems, environmental transformations, issues of family and gender, as well as political and economic organization. C-ID HIST 160, CSU, UC

HIST-298  Independent Study  
.5-3 units  SC  
- Variable hours  
- Note: Submission of acceptable educational contract to department and Instruction Office is required.  
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

HIST-299  Student Instructional Assistant  
.5-3 units  SC  
- Variable hours  
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.  
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
Horticulture

HORTICULTURE – HORT

Tish Young, Dean
Biological and Health Sciences Division
Physical Sciences Building, Room 263

Possible career opportunities
The horticulture program prepares students for numerous state licenses and industry certificates. State licenses include landscape contractor and pest control operator. Industry certifications include: nursery person, arborist, landscape technician, maintenance technician, and irrigation designer. Career choices in horticulture include: nursery technician, propagator, plant breeder, nursery manager, greenhouse grower, greenhouse manager, garden center manager, arborist/tree worker, landscape architect, landscape designer, grounds manager/municipal, landscape contractor, landscape maintenance contractor, golf course manager, and pest controller/advisor. Some career options may require more than two year of college work.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Certificate of achievement
Arboriculture
Students completing the program will be able to...
A. understand and implement safety procedures.
B. use field examinations to determine plant problems.
C. diagnose plant suitability for a given site.
D. recognize plant species and the characteristics of a given species.

This certificate of achievement prepares students for employment as arborists in a variety of settings including public and private gardens, parks, golf courses, institutions, municipalities, utilities, government agencies, and commercial and residential tree care services. It includes classroom, laboratory, and work experience/Internships. Completion of the certificate requirements will also prepare students to sit for the International Society of Arboriculture (ISA) certification.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available in the evening and/or on weekends.

required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
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<tbody>
<tr>
<td>HORT-110</td>
<td>Introduction to Horticulture</td>
<td>4</td>
</tr>
<tr>
<td>HORT-120</td>
<td>Soil Science and Management</td>
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</tr>
<tr>
<td>HORT-125</td>
<td>Integrated Pest Management</td>
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<tr>
<td>HORT-170</td>
<td>Woody Plants: Identification and Maintenance</td>
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<tr>
<td>HORT-171</td>
<td>Pruning Laboratory</td>
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<td>HORT-179</td>
<td>Arboriculture</td>
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<td>HORT-185</td>
<td>Site Analysis</td>
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<tr>
<td>HORT-187</td>
<td>Sustainable Water Practices</td>
<td>2</td>
</tr>
<tr>
<td>HORT-296</td>
<td>Internship Occupational Work</td>
<td>1-4</td>
</tr>
</tbody>
</table>

**total minimum required units** 27

Certificate of achievement
Landscape design

Students completing the program will be able to...
A. develop fundamental designer and client communication techniques.
B. perform a site analysis and inventory.
C. recognize and develop a personal landscape design process.
D. create presentations through graphic sketching and drafting.
E. identify plant and non-plant material suitable for specific site design.
F. produce a portfolio and related documents necessary to enter the marketplace.

This certificate presents the fundamental skills used by landscape designers. Using hand-drawing and digital tools, students will develop designs based upon environments typical of residential and small commercial landscape sites. Through portfolio development and presentations, students will emulate the industry practice of designer/client interaction.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available in the evening and/or on weekends.

required courses:

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<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
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<tr>
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<td>HORT-120</td>
<td>Soil Science and Management</td>
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<tr>
<td>HORT-180</td>
<td>Introduction to Landscape Architecture</td>
<td>3</td>
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<tr>
<td>HORT-181</td>
<td>Landscape Design I: Graphics</td>
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<td>Landscape Design II</td>
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<tr>
<td>HORT-187</td>
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</table>

**plus at least 3 units from:**
HORT-113 Plant Materials and their Uses: Winter and Spring | 3
HORT-114 Plant Materials and their Uses: Summer and Fall | 3

**total minimum required units** 25.5
### Certificate of achievement

**Nursery and greenhouse**

Students completing the program will be able to...

A. develop “soft” skills required for customer interactions.
B. understand the principle of “tie-in” sales.
C. recognize the need to stage plant species.
D. develop procedures to ensure the health of plants in a nursery setting.
E. know the applications of plant species to specific landscape needs.
F. know and understand the landscape design and construction process.

This certificate provides the skills needed to work in the local nursery industry including plant identification, plant propagation, labeling, nursery sales, marketing and nursery management. The program includes lectures, laboratory, and work experience.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available in the evening and/or on weekends.

#### required courses:

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<td>HORT-163</td>
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<td>CONST-135</td>
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<tr>
<td>HORT-112</td>
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</table>

**Certificate of achievement

**Plant science and horticulture**

Students completing the program will be able to...

A. recommend specific plants for given micro-climates in Contra Costa.
B. describe the impacts of clay soil on root development and water permeability.
C. describe the symptoms and causes of iron chlorosis on landscape plants.
D. identify 10 common nursery pests and recommend Integrated Pest Management controls.

This certificate program is designed to prepare students with the skills, knowledge, and training to enter into local green industry jobs in fields such as landscape installation, maintenance, park service, plant propagation, nursery, and remediation. The certificate provides a strong foundation for students who intend to pursue a baccalaureate degree in horticulture, plant science, and agriculture majors.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available evenings and/or weekends.

#### required courses:

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<td>HORT-112</td>
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**Certificate of accomplishment

**Horticulture technician**

Students completing the program will be able to...

A. integrate the knowledge of higher plant functions with site analysis.
B. describe local geographical features and their relationship to soils.
C. describe the relationship between plants, soil and water.
D. evaluate plant pruning needs.
Horticulture

This certificate introduces students to the comprehensive field of plant science and horticulture, the green industry. Green industry professionals are responsible for nurturing and protecting our natural resources and integrating them into the built environment. This foundational certificate can lead to further study in the fields of landscape installation, maintenance, park service, plant propagation, nursery, and remediation.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available evenings and/or weekends.

**Certificate of accomplishment**

**Landscape design fundamentals**

Students completing the program will be able to...
A. apply principles of planting design theory to landscape design projects.
B. prepare rendered documents for presentation.
C. prepare professional level planting plans and schedules, estimating quantity and sizes of plants required.

This certificate incorporates the basic principles of site analysis, plant science, and soil science as applied to landscape design principles. Students are prepared for entry-level positions in the landscape industry focusing on residential settings and small commercial sites.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available evenings and/or weekends.

**Certificate of accomplishment**

**Nursery technician**

Students completing the program will be able to...
A. identify, alleviate and recommend treatment for diseases and pathogens.
B. describe specific environmental and cultural requirements to grow seasonal common plants.
C. maintain and support nursery operations.

This certificate provides the fundamental skills required for entry-level employment in the nursery industry. It includes classroom and hands-on laboratory experiences.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available in the evening and/or on weekends.

**Certificate of accomplishment**

**Tree technician**

Students completing the program will be able to...
A. implement tree trimming safety procedures.
B. use field examinations to determine tree problems.
C. diagnose woody plant suitability for given sites.
D. recognize species and the characteristics of a given species.

This program prepares students for employment as assistant tree trimmers, pruners, or fallers working under certified arborists.

To earn a certificate of accomplishment, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available evenings and/or on weekends.
HORT-110  Introduction to Horticulture and Plant Science  
4 units  SC  
• 54 hours lecture/54 hours laboratory per term  
• Recommended: CHEM-106, MATH-090, and Eligibility for ENGL-122 or equivalents  
This course provides an introduction to plant sciences as related to horticulture. Topics include plant morphology, growth processes, propagation, physiology, growth media, biological competitors, and post-harvest factors of food, fiber, ornamental and native plants. CID AG-PS 106L, CSU, UC  

HORT-111  Plant Propagation and Production: Winter and Spring  
3 units  SC  
• 36 hours lecture/54 hours laboratory per term  
• Prerequisite: HORT-110 (may be taken concurrently) or equivalent  
• Recommended: HORT-125 or equivalent  
This course introduces plant propagation and production practices for nursery operations, with an emphasis on sexual and asexual reproduction of winter and spring plants. Topics include winter and spring planting specifications, transplanting, fertilizing, plant pest and disease control; structures and site layout; preparation and use of propagating and planting mediums; use and maintenance of common tools and equipment; regulations pertaining to plant production; and new plant introductions in the nursery industry. Students will also participate in greenhouse management, scheduling of plant production, seed-starting, vegetative propagation and the marketing of winter and spring containerized nursery stock. C-ID HORT 111 + HORT 112 = AG - EH 116L, CSU  

HORT-112  Plant Propagation and Production: Summer and Fall  
3 units  SC  
• 36 hours lecture/54 hours laboratory per term  
• Prerequisite: HORT-110 (may be taken concurrently) or equivalent  
• Recommended: HORT-125 or equivalent  
This course introduces plant propagation and production practices for nursery operations, with an emphasis on sexual and asexual reproduction of summer and fall plants. Topics include summer and fall planting specifications, transplanting, fertilizing, plant pest and disease control; structures and site layout; preparation and use of propagating and planting mediums; use and maintenance of common tools and equipment; regulations pertaining to plant production; and new plant introductions in the nursery industry. Students will also participate in greenhouse management, scheduling of plant production, seed-starting, vegetative propagation and the marketing of summer and fall containerized nursery stock. C-ID HORT 111 + HORT 112 = AG - EH 116L, CSU  

HORT-113  Plant Materials and their Uses: Winter and Spring  
3 units  SC  
• 36 hours lecture/54 hours laboratory per term  
• Prerequisite: HORT-110 (may be taken concurrently) or equivalent  
This course introduces the identification and uses of common plants in the California landscape that are of special interest in the winter or spring. Topics include native and introduced plant identification, growth habits, cultural and environmental requirements, uses in the landscape. Plants emphasized will come from the current California Association of Nurseries & Garden Centers (CANGC) and Professional Landcare Network (PLANET) Certification Tests Plant Lists. C-ID AG-EH 108L, CSU  

HORT-114  Plant Materials and their Uses: Summer and Fall  
3 units  SC  
• 36 hours lecture/54 hours laboratory per term  
• Prerequisite: HORT-110 (may be taken concurrently) or equivalent  
This course introduces the identification and uses of common plants in the California landscape that are of special interest in the summer or fall. Topics include native and introduced plant identification, growth habits, cultural and environmental requirements, uses in the landscape. Plants emphasized will come from the current California Association of Nurseries & Garden Centers (CANGC) and Professional Landcare Network (PLANET) Certification Tests Plant Lists. C-ID AG-EH 112L, CSU  

HORT-120  Soil Science and Management  
3 units  SC  
• 54 hours lecture per term  
• Prerequisite: HORT-110 or equivalent  
• Recommended: CHEM-106, MATH-110 and eligibility for ENGL-122 or equivalents  
This course presents a study of soil science and management of soils. Biology, physics and chemistry are integrated with geological concepts to provide a comprehensive overview of all facets of soil science. Topics covered include soil classification, derivation, use, function and management including erosion, moisture retention, structure, cultivation, organic matter and microbiology. C-ID HORT 120 + HORT 121 = AG-PS 128L, CSU, UC
HORT-121  Soil Science and Management Laboratory
1 unit  SC
- 54 hours lecture per term
- Prerequisite: HORT-110, HORT-120 or equivalents (may be taken concurrently)
- Recommended: Eligibility for ENGL-122, CHEM-106, MATH-110 or equivalents
- Formerly HORT-120L
The lab for soils will include identifying soil types, classifications, reactions, fertility and physical properties. Soil management, biology, chemistry and microbiology will be explored. Regional soils and soil quality are investigated. Laboratory required for transfer to CSU. C-ID HORT 120 + HORT 121 = AG-PS 128L, CSU

HORT-125  Integrated Pest Management
3.5 units  SC
- 54 hours/27 hours laboratory per term
- Prerequisite: HORT-110 (may be taken concurrently) or equivalent
- Recommended: eligibility for ENGL-122, MATH-110 or equivalents
- Note: This course meets the California State Pest Control Advisor, California Association of Nurserymen, and International Society of Arboriculture Continuing Education Units (CEU) license certification for CEUs necessary for pest control operators and advisors
This course will introduce students to plant, insect and disease pests associated in California. Key concepts in applied ecology of pest and beneficial species, insect, vertebrate and disease identification and control methodologies using Integrated Pest Management (IPM) and Plant Health Care models are emphasized. CSU

HORT-130  Turf Grass Management
1.5 units  SC
- 18 hours lecture/27 hours laboratory per term
This course will introduce the study of turf grass management including identification, production, installation, and maintenance. Regional irrigation methodology, fertilization regimes, pests and diseases of turf, and new cultivars are emphasized. CSU

HORT-133  Landscape Construction
3 units  SC
- 36 hours lecture/54 hours laboratory per term
- Recommended: HORT-110 and eligibility for ENGL-122 or equivalents
- Note: This course provides preparation for the C-27 landscape contracting license.
This course introduces students to the information and skills required to install residential hardscapes using SITESv2 standards. SITES v2’s rating system was developed from research, peer-reviewed literature, case-study precedents, and projects registered in the SITES Pilot Program by a diverse group of experts in soils, water, vegetation, materials, and human health and well-being. It includes best practices in landscape architecture, ecological restoration and related fields. Water conservation, plan reading, tool use and safety, and core sustainability principles are covered. CSU

HORT-148L  California Native Plants Laboratory
1 unit  SC
- 54 hours laboratory per term
- Recommended: HORT-110 or equivalent
This course presents a study of California plant communities and the environments that shape them. The dominant and typical plant constituents of each vegetation unit, focusing on native species currently used in the nursery industry will be covered. Habitat, soil, and climatic factors will be discussed as related to the plant species established in their natural and horticultural environment, exploring possibilities of integration into residential landscapes. Multiple day field trips to select California vegetation environments are taken to record relevant plant and habitat data. Destinations will vary based on season and term. CSU

HORT-150  Topics in Horticulture
.3-.4 units  SC
- Variable hours
A supplemental course in horticulture to provide a study of current concepts and problems in horticulture and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

HORT-160  Plant Propagation
1.5 units  SC
- 18 hours lecture/27 hours laboratory per term
- Recommended: HORT-110 and eligibility for ENGL-122 or equivalents
This course will introduce students to the principles and practices of plant propagation from seed and vegetative material to marketable nursery stock. The key concepts of physiological processes, environmental requirements and techniques required for successful plant production will be covered. CSU

HORT-163  Nursery and Greenhouse Practices
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course is designed to introduce the student to the nursery industry and explore the science of greenhouse management. Topics include greenhouse design and structure, manufacturing and operation, and business structure and management of a nursery. CSU
HORT-170  Woody Plants: Identification and Maintenance
4 units  SC
• 54 hours lecture/36 hours laboratory per term
•  Recommended: HORT-110 and eligibility for ENGL-122 or equivalents
•  Note: Field trips required. This course meets the plant certification for California Association of Nurserymen, California Landscape Contractors Licensing and satisfies International Society of Arboriculture Continuing Education units.
•  Formerly HORT-143 and HORT-143L

Students will learn the taxonomy, identification, growth habits, landscape values, maintenance requirements and native species of woody plants used in regional landscapes. Emphasis will be placed on regenerative landscape design with a focus on ecologically appropriate choices. CSU

HORT-171  Pruning Laboratory
1 unit  SC
• 54 hours laboratory per term
•  Formerly HORT-137L

This course will provide hands-on experience with winter and spring mechanical modification of common landscape plants, including roses, dormant trees and shrubs, and post-bloom pruning for spring flowering plants. Safety, tool maintenance, tool use, disease prevention and techniques that enhance plant structure will be covered. CSU

HORT-179  Arboriculture
4 units  SC
• 54 hours lecture/54 hours laboratory per term
•  Recommended: eligibility for ENGL-122, HORT-110 or equivalents
•  Note: This course meets the requirements for the California Association of Nurserypersons and International Society of Arboriculture Continuing Education Units (CEU).

This comprehensive class teaches students how to manage trees in urban and suburban landscapes. Included are the benefits that trees provide, and species profiles, form and ecological functions. Observational analysis skills will be taught in conjunction with scientific knowledge to direct assessment and diagnosis. Tree health subjects and applications include species selection, planting and establishment, pruning, safety, cabling, bracing, staking, watering, fertilizing, and pest control. The focus will be on trees appropriate for Contra Costa soils and micro-climates. CSU

HORT-180  Introduction to Landscape Architecture
3 units  SC
• 54 hours lecture per term
•  Recommended: HORT-110 and ENGL-122 or equivalents

This course is an introduction to the basic principles and concepts in the field of landscape architecture and landscape design. It will explore the history of human impact on natural environments and methods to mitigate those impacts. Design standards and practices governing landscape architecture and design like site analysis, planning and construction design will be covered. CSU, UC

HORT-181  Landscape Design I: Graphics
3 units  SC
• 36 hours lecture/54 hours laboratory per term
•  Recommended: HORT-110 and eligibility for ENGL-122 or equivalents

This is the first out of two courses in landscape design techniques and concepts. It will cover the basics of the landscape design process; site analysis, methods of graphic representation of vegetation, topography, and other landscape elements. Students will explore different landscape design documents. CSU, UC

HORT-182  Landscape Design II
3 units  SC
• 36 hours lecture/54 hours laboratory per term
•  Recommended: HORT-181, ARCHI-130 or equivalents, and eligibility for ENGL-122 or equivalent

This is the second of two courses in landscape design techniques and concepts. It will continue to cover and broaden the landscape design process including analysis, evaluation and application of various landscape principles based upon historical and ecological values. CSU, UC

HORT-183  Garden Design
1.5 units  SC
• 18 hours lecture/27 hours laboratory per term
•  Recommended: HORT-110 or equivalent

This basic design course is intended for students in the nursery and landscape industry as well as interested laypersons and residential homeowners. Fundamental design principles, plant selection, hardscape materials and planting techniques will be covered. Plant selection for seasonal color, energy efficiency and water usage will be introduced. Students will layout a rough site plan overview of a personal garden design. CSU
Horticulture

HORT-185  Site Analysis
1.5 units  SC
• 18 hours lecture/27 hours laboratory per term
• Recommended: HORT-182 or equivalent
This course is an introduction to the field of landscape design and the profession of landscape architecture. Landscape fundamentals are introduced, with an emphasis on the understanding of space and form in the landscape, and how a sustainable landscape design can convey meaning while fulfilling functional requirements. CSU

HORT-187  Sustainable Water Management
2 units  SC
• 18 hours lecture/54 hours laboratory per term
• Notes: Field trips will be required
This course introduces concepts and practices in landscape irrigation and sustainable water. It includes an overview of state and local water delivery systems and water use and supply issues in California. It examines relationships between plants, soils, and water. Applications of water audits, proper irrigation design, monitoring techniques, rainwater harvesting, graywater systems and subsurface irrigation will be practiced. CSU

HORT-296  Internship in Occupational Work Experience Education in HORT
1-4 units  SC
• May be repeated three times
• Variable hours
• Note: In order to enroll in the HORT-296 course, students must be interning or volunteering, register for the course, complete an online Employment Form, and participate in an orientation. The Employment Form can be accessed at www.dvc.edu/employment. Incomplete grades are not awarded for this course.
HORT-296 is a supervised internship in a skilled or professional level assignment in the student’s major field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

HORT-298  Independent Study
.5-3 units  SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

HORT-299  Student Instructional Assistant
.5-3 units  SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

HUMANITIES – HUMAN

Toni Fannin, Interim Dean
Applied and Fine Arts
Business and Foreign Language Building, Room 204

Possible career opportunities
The study of humanities can open up career opportunities in such diverse fields as advertising, banking, editing, publishing, teaching, writing, foreign service, library science, law, public administration, museum work, website design, archaeology, cultural anthropology, art criticism, tourism and journalism.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts degree
Humanities

Students completing the program will be able to...
A. use their critical thinking skills to analyze and evaluate both formally and contextually, a variety of creative works and literary documents.
B. compare and contrast the historic meaning and impact of works selected from the various arts, and from philosophic and religious literature.
C. recognize and explain the integration of arts and ideas in selected cultural, historical, and thematic contexts.
D. demonstrate their ability to articulate clearly in oral and written form objective analysis of major works from the various arts, and from philosophic and religious literature.
Associate in arts degree - Humanities

This degree is designed for students who wish to study a broad range of the arts: music, dance, visual arts, architecture, literature, drama, film, philosophy and history. Through this course of study students will learn to analyze, interpret, and compare a diverse range of art forms and cultures while deepening their understanding of the arts as human expression and honing their critical thinking and writing skills.

The associate in arts in humanities degree is both an interdisciplinary and integrative degree dedicated to the student of arts and ideas in their cultural contexts and to the comparative analysis of the arts. The degree provides a well-rounded and rich background in the creative and intellectual expression of major world civilizations, intellectual and cultural movements, and cultural works of creative expression. Humanities students develop skills in artistic analysis, aesthetic judgements, and other modes of critical thinking. Students develop the ability to view cultural material from multiple perspectives, appreciate and evaluate diverse forms of cultural expression, and understand the criticism and theory regarding major artistic works, styles, forms and movements.

DVC humanities students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.

To earn an associate in arts degree in humanities, students must complete each required course with a “C” grade or higher, and complete general education requirements as listed in the catalog. Degree requirements can be completed by attending classes in the day, the evening, or both. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

significant requirements:

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<th>units</th>
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<tr>
<td>HUMAN-110 Humanities: Ancient Civilizations (to 500 A.D.)</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN-111 Humanities: The Middle Ages and Renaissance</td>
<td>3</td>
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<tr>
<td>HUMAN-112 Humanities: The Modern World</td>
<td>3</td>
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<td>complete at least 15 units from:</td>
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<td>HUMAN-105 Introduction to Humanities: Arts and Ideas</td>
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<tr>
<td>HUMAN-108 Humanities: The Roots of Hell</td>
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<tr>
<td>HUMAN-115 Humanities: Multicultural America</td>
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<tr>
<td>HUMAN-116 Humanities: Asian Arts and Cultures</td>
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<tr>
<td>HUMAN-118 Humanities: Fiction, Film, and Criticism</td>
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<tr>
<td>HUMAN-123 The Humanities in American Popular Culture .</td>
<td>3</td>
</tr>
<tr>
<td>total minimum required units</td>
<td>18</td>
</tr>
</tbody>
</table>

HUMAN-105 Introduction to Humanities: Arts and Ideas

3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This is a non-chronological course that introduces students to the integration of creative arts and the world of ideas. Students will learn to analyze, interpret, and relate masterworks selected from literature, music, drama, painting, sculpture, photography, architecture, dance, and film, to trends in philosophy, religion, and scientific thought. Works from diverse global cultures may be selected from throughout the various ages of history. Emphasis is placed on the student’s personal interaction with human creative expression. CSU, UC

HUMAN-108 Humanities: The Roots of Hell

3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course presents an introduction to humanities focused on the theme of hell. Integrating literature, philosophy, the visual arts, music, and film from international sources, students will explore themes such as guilt and responsibility, trial and redemption, and life after death from a variety of cultures. CSU, UC

HUMAN-110 Humanities: Ancient Civilizations

3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course presents an introduction to humanities in the ancient world. Integrating the visual arts, music, literature, drama, architecture, philosophy, religion, science, technology, and history, students will explore creative works and ideas from ancient Egypt and Mesopotamia through the late Roman period. CSU, UC

HUMAN-111 Humanities: The Middle Ages and Renaissance

3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course presents an introduction to humanities in the Middle Ages and Renaissance. Integrating the visual arts, music, literature, drama, architecture, philosophy, religion, science, technology, and history, students will explore creative works and ideas from the end of the Roman period to the end of the Renaissance. CSU, UC

HUMAN-112 Humanities: The Modern World

3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course presents an introduction to humanities in the modern world. Integrating the visual arts, music, literature, drama, architecture, philosophy, religion, science, technology, and history, students will explore creative works and ideas from the Baroque era to the present. CSU, UC
Humanities

HUMAN-115  Humanities: Multicultural America  3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course presents an introduction to the multicultural diversity of contemporary American creative expression through an integrative survey of the visual arts, literature, music, thought and religion, dance, theater, and film. This course will examine contemporary creative works in relation to their historical roots, as well as the contemporary cultural context in which they have been created. CSU, UC

HUMAN-116  Humanities: Asian Arts and Cultures  3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course presents an introduction to the humanities in Asia. Integrating the visual arts, music, literature, drama, architecture, philosophy, religion, science, technology, and history, students will explore creative works and ideas from a variety of Asian cultures. CSU, UC

HUMAN-118  Humanities: Film, Fiction, and Criticism  3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course presents an introduction to the integration of three areas of the humanities—literature, cinema, and aesthetic criticism. Students will explore and evaluate the aesthetic make-up of masterworks of literature and film. CSU, UC

HUMAN-123  The Humanities in American Popular Culture  3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This is an introductory humanities course studying American popular culture: arts, entertainment, myths, the heroic tradition, and symbols. CSU, UC

HUMAN-298  Independent Study  .5-3 units  SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

HUMAN-299  Student Instructional Assistant  .5-3 units  SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

INDUSTRIAL DESIGN - IDSGN

Tish Young, Dean
Physical Science and Engineering Division
Physical Sciences Building, Room 263

IDSGN-105  Assembly and Fabrication Workshop  2 units  SC
- 18 hours lecture/54 hours laboratory per term
This course presents methods of fabrication for projects in metal, wood, plastic and other materials and includes an introduction to shop safety, machine and tool operation, and small scale design and construction. CSU

IDSGN-107  Furniture Design Studio  2 units  SC
- 18 hours lecture/54 hours laboratory per term
- Recommended: IDSGN-105 or equivalent
This course introduces furniture design, construction, and assembly. Topics include design development, working drawings and assembly drawings, digital and physical modeling, and final assembly of furniture. Detailing, fabrication, and utilization of computer numerical control (CNC) routers to build finished products will be emphasized. CSU

IDSGN-120  Introduction to Industrial and Product Design  3 units  SC
- 36 hours lecture/72 hours laboratory per term
This course is an introduction to product design and the broader study and practice of the product and industrial design profession. The historical context of product design, ergonomics, material properties, prototyping, manufacturing methods and human use factors will be covered. Studio projects explore drawing, model making, digital design and rendering of a variety of products with focus on sustainability and green product materials. CSU
IDSGN-121  Industrial and Product Design Foundations
3 units  SC
• 36 hours lecture/72 hours laboratory per term
• Prerequisite: IDSGN-120 or equivalent
This project-based industrial design course introduces comprehensive design strategy and thought processes required to develop consumer products. Product research, design, and three-dimensional prototyping will be based on design briefs to develop problem-solving abilities. CSU

IDSGN-220  Soft Goods Product Design Studio
4 units  SC
• 36 hours lecture/108 hours laboratory per term
• Prerequisite: IDSGN-120 or equivalent
This course explores materials and textiles required for the construction of wearable products and their impact on lifestyles and fashion. Students will design a variety of soft goods products including fashion, high-end accessories, clothing, shoes, and recreational equipment such as tents and sleeping bags. Creative problem-solving, research, design, and prototyping are emphasized. CSU

IDSGN-221  Transportation Design Studio
4 units  SC
• 36 hours lecture/108 hours laboratory per term
• Prerequisite: IDSGN-121 or equivalent
This course presents the history of automotive styling trends and evolution, design philosophy, and cultural influences on the automobile. Emphasis is placed on accurate proportion based on the packaging of occupants and components, human factors, target market analysis, and brand identity. Final outcomes include sketches, renderings, package drawings, written reports, and scale models. CSU

INTD-120  College Seminar
.5-3 units  SC
• Variable hours
• Formerly COLOY-120
College seminar provides the opportunity for students and faculty to discuss and analyze particular topics related to one or more disciplines. The schedule of classes will indicate the specific subject matter of each seminar offered. CSU

INTD-140  Tutor Training
1 unit  SC
• 18 hours lecture per term
• Note: Students who want to tutor in the Pleasant Hill Campus English Lab must take ENGL-140 instead of INTD-140. Students who want to tutor in the Pleasant Hill Campus Math Lab must take MATH-140 instead of INTD-140.
This one-unit course will provide students with an introduction to the principles of effective tutoring. Students will learn the strategies of tutoring that foster independent learning and will use strategies such as questioning techniques to deepen critical thinking. CSU

ITALIAN – ITAL
Toni Fannin, Interim Dean
Applied and Fine Arts
Business and Foreign Language Building, Room 204

Possible career opportunities
The study of Italian can open up opportunities in communications, foreign trade and banking, transportation, government, the Foreign Service, tourism, library services, teaching, professional translating, journalism, and all levels of education, including university teaching. Most foreign language careers require more than two years of study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts
Italian
Students completing the program will be able to...
A. comprehend a spoken dialogue in the target language.
B. identify the present, past and future tenses in a written paragraph.
C. interpret cultural behavior.
Italian

The associate in arts degree in Italian at DVC will provide students with skills in understanding, speaking, reading and writing Italian. It also gives students a greater understanding of Italian culture and civilization and will prepare them for a broad range of international and domestic career opportunities and professions. The degree will also provide students the opportunity to transfer to UC, CSU and other four-year colleges and universities to earn a bachelor’s degree.

The DVC Italian major is intended for transfer. Students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to baccalaureate-granting institutions of their choice are met. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is appropriate for those students who do not intend to transfer. Students may not take a pass/no pass option for major courses and each of the major requirements must be completed with a “C” grade or higher. Certain courses may satisfy both major and general education requirements; however, the units are counted only once.

To earn an associate degree in Italian, students must complete 20 units from the list of major requirements, which will provide students with the essential grammar of the language, culture and basic literature of Italy. Students with no previous knowledge of Italian when entering DVC will take the first four courses in the list for a total of 20 units. If students enter the program with previous knowledge of Italian, they may start at the second term level and take fifth and sixth terms to achieve a total of 21 units.

This certificate of achievement provides students, prospective employers and others with documented evidence of persistence and academic accomplishment in the language. The certificate requires completion of at least 13 units from the following list of courses. Students may not take a credit/no credit option for required courses and each course must be completed with a “C” grade or higher.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITAL-120</td>
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<td>ITAL-121</td>
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<td>ITAL-220</td>
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<td>ITAL-230</td>
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<tr>
<td>ITAL-231</td>
<td>Sixth Term Italian</td>
<td>3</td>
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</tbody>
</table>

Certificate of achievement

Italian

Students completing the program will be able to...

A. Comprehend a spoken dialogue in the target language.
B. Identify the present, past and future tenses in a written paragraph.
C. Interpret cultural behavior.

This certificate of achievement was created to give students the opportunity to show potential employers in this country and in other countries that the student has completed a certain number of courses in Italian and prepares students with an intermediate to advanced knowledge of Italian and familiarizes them with the culture of Italy.

**ITAL-150 Topics in Italian**

.3-4 units SC

- Variable hours

A supplemental course in Italian to provide a study of current concepts and problems in Italian and related subdivisions. Specific topics will be announced in the schedule of classes. CSU
ITA200  Third Term Italian  
5 units  SC  
• 90 hours lecture per term  
• Prerequisite: ITAL-121 or three years of high school study or equivalent  
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.  
This is a third term intermediate Italian course that develops functional fluency in understanding, speaking, reading, and writing Italian. Students are introduced to the study of Italian literature. There is further study and interpretation of Italian culture. CSU, UC  

ITAL-221 Fourth Term Italian  
5 units  SC  
• 90 hours lecture per term  
• Prerequisite: ITAL-220 or four years of high school study or equivalent  
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.  
This is a fourth term intermediate Italian course that continues to develop fluency in all aspects of the Italian language with particular attention to literary forms as reflected in contemporary Italian. The present, past and imperfect subjunctive are covered. CSU, UC  

ITAL-230 Fifth Term Italian  
3 units  SC  
• 54 hours lecture per term  
• Prerequisite: ITAL-221 or equivalent  
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.  
This course is a study of representative, Italian literary works. Students participate actively through discussion, oral reports, and written analysis in Italian. CSU, UC  

ITAL-231 Sixth Term Italian  
3 units  SC  
• 54 hours lecture per term  
• Prerequisite: ITAL-230 or equivalent  
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.  
This is a continuation of ITAL-230 with intensive additional study of representative literary works. Students read various types of literature and participate actively through discussion, written reports and written analysis in Italian. CSU, UC  

ITAL-299 Student Instructional Assistant  
.5-3 units  SC  
• Variable hours  
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.  
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU  

JAPANESE – JAPAN  
Toni Fannin, Interim Dean  
Applied and Fine Arts  
Business and Foreign Language Building, Room 204  
Possible career opportunities  
The study of Japanese can open up opportunities in communications, foreign trade and banking, transportation, government, the Foreign Service, tourism, library services, teaching, professional translating, journalism, and all levels of education, including university teaching. Most foreign language careers require more than two years of study.  
Program learning outcomes  
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.  
Associate in arts degree  
Japanese  
Students completing the program will be able to...  
A. comprehend a spoken dialogue in the target language.  
B. identify the present, past and future tenses in a written paragraph.  
C. interpret cultural behavior.  
The associate in arts degree in Japanese at DVC will provide students with skills in understanding, speaking, reading and writing Japanese. The curriculum exposes students to Japanese culture and civilization and provides foundational skills in language that can apply to a broad range of international and domestic career opportunities and professions. The degree will provide lower division preparation for transfer to UC, CSU and other four year colleges and universities to earn a bachelor’s degree.
Japanese

The DVC Japanese major is intended for transfer. Students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to baccalaureate-granting institutions of their choice are met. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is appropriate for those students who do not intend to transfer. Students may not take a pass/no pass option for major courses and each of the major requirements must be completed with a “C” grade or higher. Certain courses may satisfy both major and general education requirements; however, the units are counted only once.

To earn an associate in arts degree in Japanese, students must complete one of the following lists of courses. The core Japanese courses provide students with the essential grammar, vocabulary, basic grammar, sentence structure, two types of Japanese characters (Hiragana and Katakana) and realistic aspects of Japanese culture. Basic Kanji characters provide students with practice in Kanji characters used in writing the Japanese language.

List A

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>JAPAN-120 First Term Japanese</td>
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<tr>
<td>JAPAN-121 Second Term Japanese</td>
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<tr>
<td>JAPAN-220 Third Term Japanese</td>
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<td>JAPAN-221 Fourth Term Japanese</td>
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**total minimum required units 20**

List B

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>JAPAN-121 Second Term Japanese</td>
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<tr>
<td>JAPAN-130 First Term Kanji</td>
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<td>JAPAN-131 Second Term Kanji</td>
<td>3</td>
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<td>JAPAN-132 Third Term Kanji</td>
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<tr>
<td>JAPAN-220 Third Term Japanese</td>
<td>5</td>
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**total minimum required units 21**

List C

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<td>JAPAN-130 First Term Kanji</td>
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<tr>
<td>JAPAN-131 Second Term Kanji</td>
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<tr>
<td>JAPAN-132 Third Term Kanji</td>
<td>3</td>
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<tr>
<td>JAPAN-220 Third Term Japanese</td>
<td>5</td>
</tr>
<tr>
<td>JAPAN-221 Fourth Term Japanese</td>
<td>5</td>
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</table>

**total minimum required units 19**

Certificate of achievement Japanese

Students completing the program will be able to...

A. comprehend a spoken dialogue in the target language.
B. identify the present, past and future tenses in a written paragraph.
C. interpret cultural behavior.

The certificate of achievement was created to give students the opportunity to show potential employers in this country and in other countries that the student has completed a certain number of courses in Japanese and prepares students with an intermediate to advanced knowledge of Japanese and familiarizes them with the culture of Japan. This certificate of achievement provides students, prospective employers and others with documented evidence of persistence and academic accomplishment in the language. The certificate requires completion of one of the following lists of courses. Students may not take a credit/no credit option for required courses and each course must be completed with a “C” grade or higher.

**List A**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>JAPAN-120 First Term Japanese</td>
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<td>JAPAN-220 Third Term Japanese</td>
<td>5</td>
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<td>JAPAN-221 Fourth Term Japanese</td>
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**total minimum required units 15**

**List B**

<table>
<thead>
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<td>JAPAN-131 Second Term Kanji</td>
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<td>JAPAN-220 Third Term Japanese</td>
<td>5</td>
</tr>
<tr>
<td>JAPAN-221 Fourth Term Japanese</td>
<td>5</td>
</tr>
</tbody>
</table>

**total minimum required units 13**

**JAPAN-120  First Term Japanese**

5 units  SC

- 90 hours lecture per term
- Note: This course is equivalent to two years of high school study.

This course is an introduction to the Japanese language. Using realistic situations, students will learn proper pronunciation, vocabulary, basic grammar, sentence structure, two types of Japanese characters (Hiragana and Katakana) and realistic aspects of Japanese culture. Basic Kanji characters will be introduced. CSU, UC

**JAPAN-121  Second Term Japanese**

5 units  SC

- 90 hours lecture per term
- Prerequisite: JAPAN-120 or two years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This course is designed for those who have taken JAPAN-120 or who have the equivalent knowledge and skills. Students will further develop their ability to speak, read and write Japanese. They will deepen their knowledge of Japanese culture and society and improve their communication skills. An increasing number of Kanji characters will be introduced. CSU, UC
JAPAN-130  First Term Kanji
3 units  SC
- 54 hours lecture per term
- Recommended: JAPAN-120 or equivalent

This course is an intensive study of Kanji characters to enhance competence in reading and writing Japanese in daily life situations. Examples include reading and comprehending simple essays and articles, and understanding Kanji used in everyday life. The course will cover up to 169 characters. CSU

JAPAN-131  Second Term Kanji
3 units  SC
- 54 hours lecture per term
- Recommended: JAPAN-130 or equivalent

This course is designed for those who have taken JAPAN-130 or who have the equivalent knowledge and skills. Students will further develop their competence in reading and writing Japanese. Examples include reading more complicated essays and letters, and understanding maps, road signs, and TV listings. The course will cover up to 345 characters. CSU

JAPAN-132  Third Term Kanji
3 units  SC
- 54 hours lecture per term
- Recommended: JAPAN-131 or equivalent

This course is designed for those who have taken JAPAN-131 or who have the equivalent knowledge and skills. Students will improve their advanced competence in reading and writing Japanese. Examples include reading and comprehending intermediate-level essays and understanding the pamphlets for travel, train timetables, and newspaper headlines. The course will cover up to 500 characters. CSU

JAPAN-150  Topics in Japanese
.3-4 units  SC
- Variable hours

A supplemental course in Japanese to provide a study of current concepts and problems in Japanese and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

JAPAN-220  Third Term Japanese
5 units  SC
- 90 hours lecture per term
- Prerequisite: JAPAN-121 or three years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This course develops fluency in speaking, listening, reading, and writing skills in Japanese. Students will learn both formal and informal speech styles, and expand conversational skills and vocabulary with new Kanji characters. A variety of contemporary and traditional Japanese cultural elements will be explored. CSU, UC

JAPAN-221  Fourth Term Japanese
5 units  SC
- 90 hours lecture per term
- Prerequisite: JAPAN-220 or four years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This course further develops the fluency in speaking, listening, reading, and writing skills in Japanese. Students will extend their ability to communicate effectively and properly in various real-life situations, learn complex grammatical structures, and increase vocabulary using a significant number of Kanji characters. This course includes further study of contemporary and traditional Japanese cultural elements. CSU, UC

JAPAN-298  Independent Study
.5-3 units  SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

JAPAN-299  Student Instructional Assistant
.5-3 units  SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
Journalism

JOURNALISM – JRNAL

Obed Vazquez, Dean
English Division
Faculty Office Building, Room 136

Possible career opportunities
The journalism program prepares students in the writing, reporting, and critical thinking skills required for jobs in the news media or for transfer to a journalism program at a four-year institution. Career options include copy editor, script writer, broadcast journalist, newspaper reporter, magazine writer, columnist, public information officer, online writer, speech writer, freelance writer, advertising copy writer, editor, and photojournalist. Some career options may require more than two years of college study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts in journalism for transfer
Students completing the program will be able to...
A. use a variety of media and sources to produce journalistic products that demonstrate good news judgment, appropriate sourcing, accuracy and completeness, technical competence and adherence to ethical, legal and style guidelines.
B. understand and analyze how history, economics, politics, law or government regulation affect the climate for journalism and freedom of speech in the United States.
C. demonstrate good work habits, time management and professionalism while working collaboratively and under deadline pressure to produce a news product.

The journalism program prepares students in the writing, reporting and critical thinking skills required for jobs in the news media and for transfer to a journalism program at a four-year institution. Career options include copy editor, script writer, broadcast journalist, newspaper reporter, magazine writer, columnist, public information officer, online writer, speech writer, freelance writer, advertising copy writer, editor, and photojournalist. Some career options may require more than two years of college study.

The associate in arts in journalism for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:
- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of "C" or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSU GE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

<table>
<thead>
<tr>
<th>major requirements:</th>
<th>units</th>
</tr>
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<tbody>
<tr>
<td>JRNAL-110 Mass Media of Communications</td>
<td>3</td>
</tr>
<tr>
<td>JRNAL-120 Introduction to Newswriting and Reporting</td>
<td>3</td>
</tr>
<tr>
<td>JRNAL-126 News Production Laboratory I</td>
<td>3</td>
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<tr>
<td>plus at least 3 units from:</td>
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<tr>
<td>JRNAL-127 News Production Laboratory II</td>
<td>3</td>
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<tr>
<td>JRNAL-130 Multimedia Reporting</td>
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<td>plus at least 6 units from:</td>
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<td>ART-160 Photography I</td>
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<td>BUS-240 Business Statistics</td>
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<td>or MATH-142 Elementary Statistics with Probability</td>
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<td>COMM-123 Argumentation and Debate</td>
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<tr>
<td>ENGL-126 Critical Thinking: The Shaping of Meaning in Language</td>
<td>3</td>
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<tr>
<td>ECON-220 Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>or ECON-221 Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>POLSC-121 Introduction to United States Government</td>
<td>3</td>
</tr>
<tr>
<td>POLSC-220 Comparative Politics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total minimum required units 18
JRNAL-110  Mass Media of Communication
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course presents an introduction to major mass media and their impact on American life. The history of mass media, how they are structured, who controls them and how they influence individual and social values will be explored. Topics include First Amendment rights and responsibilities, techniques of persuasion and propaganda, the blurred line between entertainment and news, the role of journalists in war time, issues of credibility and trust and the impact of the new media - digital technology and the Internet - on the traditional forms of mass communication. Critical thinking and analysis of the images and sounds that so powerfully shape the public mind will be emphasized. C-ID JOUR 100, CSU, UC

JRNAL-120  Introduction to Newswriting and Reporting
3 units  SC
- 54 hours lecture per term
- Recommended: ENGL-118 or equivalent

This course introduces students to journalism reporting and writing for print, online and the broadcast media. It includes generating story ideas, developing sources, conducting interviews and online research, taking accurate notes, observing detail, exercising news judgment and crafting stories appropriate for various media. The course also covers sensitivity to multicultural issues and explores libel laws and media ethics. Students will learn how to write strong lead sentences, how to organize their findings into lively and informative stories, and how to write and revise their work on deadline. Students may publish some assignments in the college’s student newspaper, The Inquirer, or use them for other student media. C-ID JOUR 110, CSU

JRNAL-124  Fundamentals of Journalism for Non-Majors I
1.5 units  SC
- 9 hours lecture/54 hours laboratory by arrangement per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Journalism transfer students should take JRNAL-120.

This course introduces non-journalism majors to the fundamentals of reporting and writing the news through a practical approach that includes student media experience. It includes exercising news judgment, conducting interviews, taking accurate notes, observing detail, taking simple digital news photographs and crafting a basic news story. Students will learn how to write strong lead sentences, how to organize their findings into lively and informative stories, and how to write and revise their work on deadline. Their work will be published in the college’s student newspaper, The Inquirer, or its online news site. CSU

JRNAL-125  News Production Fundamentals
2-3 units  SC
- Variable hours
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Journalism transfer students should take JRNAL-120.

This course introduces non-journalism majors to the fundamentals of reporting and writing the news through a practical approach that includes student media experience. Work will be published in the college’s student newspaper, The Inquirer, or its online news site. All students will learn to exercise news judgment, apply basic legal and ethical principles, conduct and document interviews, take simple digital news photographs and craft a basic news story. Students who enroll in three units will go into greater depths on these topics and may begin to apply their skills using different media or in feature-style writing. CSU

JRNAL-126  News Production Laboratory I
3 units  SC
- 18 hours lecture/108 hours laboratory per term
- Prerequisite: JRNAL-120 (may be taken concurrently) or JRNAL-125 or equivalent
- Recommended: ENGL-118 or equivalent

Intermediate journalism students will broaden their news-gathering skills while producing content for the college’s student newspaper, The Inquirer, and its website. Boat coverage and working in formats suitable for print, social media and the Web will be emphasized in this class. Students will be expected to exercise news judgment, meet daily and weekly deadlines, adhere to the highest ethical principles and be vigilant about accuracy. They will also exercise their First Amendment responsibilities by allowing The Inquirer to be a forum for the diverse views of the DVC community. C-ID JOUR 130, CSU

JRNAL-127  News Production Laboratory II
3 units  SC
- 18 hours lecture/108 hours laboratory per term
- Prerequisite: JRNAL-126 or equivalent

Students with previous experience in working for publication will provide editorial leadership and in-depth coverage for the college’s student newspaper, The Inquirer, and its website. Management skills, methods for tackling longer-term projects, and working in formats suitable for print, social media and the Web will be emphasized in this class. Students will be expected to exercise news judgment, meet daily and weekly deadlines, adhere to the highest ethical principles and be vigilant about accuracy. They will also exercise their First Amendment responsibilities by allowing The Inquirer to be a forum for the diverse views of the DVC community. C-ID JOUR 131, CSU
JRNAL-128  News Production Portfolio Development

2-3 units    SC
- Variable hours
- Note: Classes such as JRNAL-120, ART-105, ART-160, ARTDM-136, ARTDM-165, ARTDM-214 or FTVE-120 could provide good preparation for this course of instruction.

This intermediate class is designed for students preparing for employment in journalism and associated fields. Students with prior instruction in reporting, photography, illustration, design or digital media will create and publish works for The Inquirer while learning the basic principles of preparing a professional portfolio.

JRNAL-130  Multimedia Reporting

3 units    SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course is an introduction to multimedia storytelling tools for journalism. Students will explore techniques that use tools such as text, photographs, video or audio to tell news or feature stories on the Internet or through social media. It will also include techniques in digital research.

JRNAL-160  Introduction to Feature Reporting

3 units    SC
- 54 hours lecture per term
- Recommended: ENGL-118 or equivalent

This course equips students to research, write and market feature stories for magazines, websites and newspapers. Topics covered include choosing and focusing on a story idea, interviewing sources, using storytelling techniques, locating a market and framing a query. Students learn to evaluate and use online sources and public documents. Basic principles of media law, including libel and copyright, are introduced. Students develop feature stories and market them to appropriate venues.

JRNAL-298  Independent Study

.5-3 units    SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment.

KINESIOLOGY – KINES

Christine Worsley, Dean
Kinesiology, Athletics and Dance Division
Kinesiology Office Building, Room 104

Possible career opportunities
Kinesiology is the interdisciplinary study of human movement, including but not limited to history, sociology, psychology, physiology and biomechanics. As a result, students earning a degree in kinesiology are able to pursue a wide variety of careers: physical education, coaching, athletic training (including sports medicine and allied health fields such as physical therapy, physician assistant and nursing), fitness instruction (personal training and strength and conditioning) and sports/recreation management (including sport administration, journalism, marketing, and law, as well as community parks and recreation). Many career options require more than two years of college study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Fitness instruction
Students completing the program will be able to...
A. conduct assessment of personal fitness levels.
B. develop a conditioning program to improve conditioning levels utilizing the periodization model.
C. design a conditioning program to meet the unique needs of special populations.
D. take the NASI, AFAA or other national certification exam.

The associate in science degree in fitness instruction is a two-year course of study designed for students who are interested in a career in the fitness industry and/or wish to transfer to a four-year institution in kinesiology or related major. It will expose students to many facets of the fitness industry and is appropriate for those students who wish to become a personal trainer and/or group exercise instructor. Completion of the degree will also prepare students to sit for one of the national personal training or group exercise instructor certification examinations. Students who intend to transfer to a four-year institution must consult with program faculty and college counselors to insure that the requirements for transfer to appropriate institutions are met. Possible programs of study at the baccalaureate level include exercise science, strength and conditioning, preparation for a teaching credential or other specialty area under the kinesiology umbrella.
To earn a degree, students must complete each course used to meet a major requirement with a "C" grade or higher and complete general education requirements as listed in the catalog. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

**major requirements:**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSCI-230</td>
<td>Advanced First Aid/CPR</td>
<td>3</td>
</tr>
<tr>
<td>KINES-234</td>
<td>Introduction to Sports Medicine and Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>KINES-240</td>
<td>Principles of Optimizing Human Performance</td>
<td>3</td>
</tr>
<tr>
<td>KINES-242</td>
<td>Exercise Techniques and Fitness Assessments</td>
<td>1</td>
</tr>
<tr>
<td>KINES-246</td>
<td>Sport and Exercise Psychology</td>
<td>3</td>
</tr>
<tr>
<td>KINES-248</td>
<td>Sport and Society</td>
<td>3</td>
</tr>
<tr>
<td>KINES-250</td>
<td>Professional Aspects of Personal Training</td>
<td>3</td>
</tr>
<tr>
<td>KINES-252</td>
<td>Professional Aspects of Group Personal Training</td>
<td>1.5</td>
</tr>
<tr>
<td>KINES-254</td>
<td>Practical Experience in Personal Training and Fitness Instruction I</td>
<td>4</td>
</tr>
<tr>
<td>KINES-255</td>
<td>Practical Experience in Personal Training and Fitness Instruction II</td>
<td>4</td>
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</table>

**plus at least 3 units from:**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOSC-101</td>
<td>Fundamentals of Biological Science</td>
<td>3</td>
</tr>
<tr>
<td>BIOSC-102</td>
<td>Fundamentals of Biological Science with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIOSC-116</td>
<td>Human Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOSC-117</td>
<td>Human Biology with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIOSC-120</td>
<td>Introduction to Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>BIOSC-139</td>
<td>Human Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>BIOSC-140</td>
<td>Human Physiology</td>
<td>5</td>
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**plus at least 3 units from:**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSCI-124</td>
<td>Health and Wellness</td>
<td>3</td>
</tr>
<tr>
<td>HSCI-170</td>
<td>Women's Health</td>
<td>3</td>
</tr>
</tbody>
</table>

**plus at least 3 units from:**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUTRI-120</td>
<td>Sports Nutrition: Fueling the Athlete</td>
<td>3</td>
</tr>
<tr>
<td>NUTRI-160</td>
<td>Nutrition: Science and Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

**plus at least 2 units from:**

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<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNACT-146A</td>
<td>Theory and Practice of Strength Training and Fitness I</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-146B</td>
<td>Theory and Practice of Strength Training and Fitness II</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-146C</td>
<td>Theory and Practice of Strength Training and Fitness III</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-146D</td>
<td>Theory and Practice of Strength Training and Fitness IV</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-148A</td>
<td>Beginning Power Lifting</td>
<td>0.5-2</td>
</tr>
</tbody>
</table>

**plus at least 2 units from:**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNACT-110A</td>
<td>Beginning Hatha Yoga</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-110B</td>
<td>Intermediate Hatha Yoga</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-110C</td>
<td>Advanced Hatha Yoga</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-114A</td>
<td>Beginning Stretch and Yoga for Sports</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-114B</td>
<td>Intermediate Stretch and Yoga for Sports</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-120</td>
<td>Physical Fitness</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-122A</td>
<td>Beginning Body Sculpt</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-124A</td>
<td>Beginning Hips, Thighs and Abs</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-124B</td>
<td>Intermediate Hips, Thighs and Abs</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-126</td>
<td>Aerobics/Step Aerobics</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-128A</td>
<td>Beginning Cardio Kickboxing</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-128B</td>
<td>Intermediate Cardio Kickboxing</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-140</td>
<td>Stationary Cycling</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-142A</td>
<td>Beginning Boot Camp</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-144A</td>
<td>Beginning Super Circuit</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-144B</td>
<td>Intermediate Super Circuit</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNAND-105A</td>
<td>Pilates Mat Work I</td>
<td>0.5-2</td>
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</table>

**total minimum required units**: 41.5

**recommended courses:**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSMG-191</td>
<td>Small Business Management</td>
<td>3</td>
</tr>
<tr>
<td>KINES-210</td>
<td>Introduction to Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>KINES-230</td>
<td>Overview of Sports Medicine and Fitness Professions</td>
<td>2</td>
</tr>
<tr>
<td>KINES-232</td>
<td>Introduction to Sports Massage</td>
<td>1.5</td>
</tr>
<tr>
<td>KINES-235</td>
<td>Advanced Sports Medicine and Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>KINES-256</td>
<td>Theory and Practice of Performance</td>
<td>2</td>
</tr>
<tr>
<td>KINES-257</td>
<td>Theory and Practice of Corrective Exercise Training</td>
<td>2</td>
</tr>
<tr>
<td>KINES-258</td>
<td>Personal Training National Examination Preparation</td>
<td>2</td>
</tr>
</tbody>
</table>

**Associate in science degree**

**Kinesiology**

Students completing the program will be able to...

A. develop practice plans, analyze strategy and teach techniques specific to a chosen sport.
B. incorporate concepts of an athlete's psychological and physical health to improve performance.
C. qualify for employment as an effective coach of youth, high school, and/or adult sports.
D. apply for transfer to a four-year institutions in such disciplines as kinesiology, exercise science and/or a teacher credential program.

The associate in science degree in kinesiology offers students two areas of specialization from which to choose: sport and recreation management or coaching. The degree is a two-year course of study designed for students who are interested in a career as an athletic coach and/or preparing for an entry level job in sports or recreation administration at a wide variety of businesses such as fitness centers, spas and wellness centers, recreational facilities, etc.
Kinesiology

While most of the kinesiology major requirements are transferable and many meet prerequisites required in associate majors, this degree is not designed as a transfer curriculum. Students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Possible programs of study at the baccalaureate level include pursuit of a teaching credential to become a secondary school teacher/coach, or exercise science, sports management or other specialty area related to the discipline of kinesiology. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.

To earn this degree, students must complete the core major requirements as indicated and select an area of specialization. Students must complete each course used to meet a major requirement with a “C” grade or higher and complete general education requirements as listed in the catalog. Certain courses may satisfy both major and general education requirements; however the units are only counted once. For this degree a maximum of 15 units may be double-counted.

major requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>HSCI-230</td>
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</tr>
<tr>
<td>KINES-210</td>
<td>Introduction to Kinesiology</td>
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<tr>
<td>KINES-234</td>
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<td>KINES-240</td>
<td>Principles of Optimizing Human Performance</td>
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<td>Exercise Techniques and Fitness Assessments</td>
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<tr>
<td>KINES-246</td>
<td>Sport and Exercise Psychology</td>
<td>3</td>
</tr>
<tr>
<td>KINES-248</td>
<td>Sport and Society</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH-101</td>
<td>Introduction to Psychology</td>
<td>3</td>
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</table>

plus at least 3 units from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
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<td>Sports Nutrition: Fueling the Athlete</td>
<td>3</td>
</tr>
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<td>Nutrition: Science and Applications</td>
<td>3</td>
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</tbody>
</table>

plus at least 3 units from:

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-240</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH-135</td>
<td>College Algebra</td>
<td>4</td>
</tr>
<tr>
<td>MATH-142</td>
<td>Elementary Statistics with Probability</td>
<td>4</td>
</tr>
</tbody>
</table>

plus at least 3 units from:

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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<td>3</td>
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<td>BIOSC-102</td>
<td>Fundamentals of Biological Science with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIOSC-116</td>
<td>Human Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOSC-139</td>
<td>Human Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>BIOSC-140</td>
<td>Human Physiology</td>
<td>5</td>
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coaching emphasis

plus at least 3 units from:

<table>
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<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>KINES-260</td>
<td>Theory of Coaching Individual Sports</td>
<td>3</td>
</tr>
<tr>
<td>KINES-262</td>
<td>Theory of Coaching Team Sports</td>
<td>3</td>
</tr>
<tr>
<td>KINES-264</td>
<td>Theory of Coaching Football</td>
<td>3</td>
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</table>

plus at least 2 units from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>KNACT-100A</td>
<td>Beginning Swimming</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-100B</td>
<td>Intermediate Swimming</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-136</td>
<td>Distance Track Training</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-160A</td>
<td>Beginning Badminton</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-160B</td>
<td>Intermediate Badminton</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-164A</td>
<td>Beginning Golf</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-164B</td>
<td>Intermediate Golf</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-166</td>
<td>Tennis</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-170A</td>
<td>Beginning Basketball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-170B</td>
<td>Intermediate Basketball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-174A</td>
<td>Beginning Men’s Lacrosse</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-174B</td>
<td>Intermediate Men’s Lacrosse</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-176A</td>
<td>Beginning Soccer</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-176B</td>
<td>Intermediate Soccer</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-182A</td>
<td>Beginning Volleyball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-182B</td>
<td>Intermediate Volleyball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-182C</td>
<td>Advanced Volleyball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-195A</td>
<td>Beginning Plyometrics and Agility Training for Female Athletes</td>
<td>0.25-1</td>
</tr>
<tr>
<td>KNACT-195B</td>
<td>Intermediate Plyometrics and Agility Training for Female Athletes</td>
<td>0.25-1</td>
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<tr>
<td>KNACT-195C</td>
<td>Advanced Plyometrics and Agility Training for Female Athletes</td>
<td>0.5-2</td>
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or at least 2 units from:

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNICA-199</td>
<td>Sport-Specific Athletic Conditioning</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNICA-200A</td>
<td>Intercollegiate Basketball-A, Men</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-202A</td>
<td>Intercollegiate Basketball-A, Men</td>
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</tr>
<tr>
<td>KNICA-202B</td>
<td>Intercollegiate Basketball-B, Men</td>
<td>1</td>
</tr>
<tr>
<td>KNICA-203A</td>
<td>Intercollegiate Basketball-A, Women</td>
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</tr>
<tr>
<td>KNICA-203B</td>
<td>Intercollegiate Basketball-B, Women</td>
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</tr>
<tr>
<td>KNICA-206</td>
<td>Intercollegiate Football, Men</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-210</td>
<td>Intercollegiate Soccer, Women</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-215</td>
<td>Intercollegiate Softball, Women</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-216</td>
<td>Intercollegiate Swimming and Diving, Men</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-217</td>
<td>Intercollegiate Swimming and Diving, Women</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-223</td>
<td>Intercollegiate Volleyball, Women</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-224</td>
<td>Intercollegiate Water Polo, Men</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-225</td>
<td>Intercollegiate Water Polo, Women</td>
<td>3</td>
</tr>
</tbody>
</table>

* activity course or intercollegiate athletic participation must be selected in area of coaching emphasis

total minimum required units 36

sport and recreation management emphasis

required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>KINES-220</td>
<td>Introduction to Sport and Recreation Management</td>
<td>3</td>
</tr>
<tr>
<td>KINES-222</td>
<td>Practical Experience in Sport and Recreation Management I</td>
<td>4</td>
</tr>
<tr>
<td>KINES-223</td>
<td>Practical Experience in Sport and Recreation Management II</td>
<td>4</td>
</tr>
</tbody>
</table>
**Kinesiology**

**Associate in science degree**

**Sports medicine/athletic training**

Students completing the program will be able to...

A. differentiate between a variety of anatomical structures and related terminology.

B. utilize injury evaluation, treatment, rehabilitation and massage techniques.

C. students completing this program will be able to develop an educational and career plan matched to their skills, aptitudes and professional requirements.

The associate in science degree in sports medicine/athletic training program is a two-year course of study designed for students interested in becoming allied health care professionals such as athletic trainers or physical therapists. It combines academic, laboratory and clinical experience to prepare students for further study or to obtain employment as an entry-level rehabilitation/allied health paraprofessional. Earning this degree may facilitate the student's transfer to a four-year college and/or professional program.

DVC Sports medicine/athletic training students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.

Students must complete each course used to meet a major requirement with a “C” grade or higher, maintain an overall GPA of 2.75 or higher and complete general education requirements as listed in the catalog. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

**major requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOSC-139</td>
<td>Human Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>KINES-230</td>
<td>Overview of Sports Medicine and Fitness Professions</td>
<td>2</td>
</tr>
<tr>
<td>KINES-232</td>
<td>Introduction to Sports Massage</td>
<td>1.5</td>
</tr>
<tr>
<td>KINES-234</td>
<td>Introduction to Sports Medicine and Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>KINES-235</td>
<td>Advanced Sports Medicine and Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>KINES-236</td>
<td>Clinical Experiences in Sports Medicine and Athletic Training</td>
<td>2</td>
</tr>
<tr>
<td>KINES-237</td>
<td>Clinical Experiences in Sports Medicine and Athletic Training II</td>
<td>2</td>
</tr>
<tr>
<td>KINES-238</td>
<td>Clinical Experiences in Sports Medicine and Athletic Training III</td>
<td>2</td>
</tr>
<tr>
<td>KINES-239</td>
<td>Clinical Experiences in Sports Medicine and Athletic Training IV</td>
<td>2</td>
</tr>
<tr>
<td>KINES-240</td>
<td>Principles of Optimizing Human Performance</td>
<td>3</td>
</tr>
<tr>
<td>KINES-242</td>
<td>Exercise Techniques and Fitness Assessments</td>
<td>3</td>
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<tr>
<td>KINES-248</td>
<td>Sport and Society</td>
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<tr>
<td>PSYCH-101</td>
<td>Introduction to Psychology</td>
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**recommended degree electives:**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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<tbody>
<tr>
<td>BIOSC-140</td>
<td>Human Physiology</td>
<td>5</td>
</tr>
<tr>
<td>KINES-230</td>
<td>Overview of Sports Medicine and Fitness Professions</td>
<td>2</td>
</tr>
</tbody>
</table>

**plus at least 3 units from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM-107</td>
<td>Integrated Inorganic, Organic, and Biological Chemistry</td>
<td>5</td>
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<tr>
<td>CHEM-108</td>
<td>Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM-109</td>
<td>Introduction to Organic and Biochemistry</td>
<td>4</td>
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<tr>
<td>CHEM-120</td>
<td>General College Chemistry I</td>
<td>5</td>
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<tr>
<td>PHYS-110</td>
<td>Elementary Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS-120</td>
<td>General College Physics I</td>
<td>4</td>
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</tbody>
</table>

**plus at least 3 units from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>BIOSC-101</td>
<td>Fundamentals of Biological Science</td>
<td>3</td>
</tr>
<tr>
<td>BIOSC-102</td>
<td>Fundamentals of Biological Science with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIOSC-130</td>
<td>Principles of Cellular and Molecular Biology</td>
<td>5</td>
</tr>
<tr>
<td>HSCI-230</td>
<td>Advanced First Aid/CPR</td>
<td>3</td>
</tr>
<tr>
<td>KINES-210</td>
<td>Introduction to Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>KINES-246</td>
<td>Sport and Exercise Psychology</td>
<td>3</td>
</tr>
<tr>
<td>NUTRI-160</td>
<td>Nutrition: Science and Applications</td>
<td>3</td>
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</tbody>
</table>

**total minimum required units**

41.5
Associate in arts in kinesiology for transfer

Students completing the program will be able to...

A. describe and explain the scholarly study of human movement and its significance to our understanding of physical activity.
B. assess the importance of physical activity in our daily lives (e.g. recreation, self-expression, health, competition, etc.).
C. differentiate among the sub-disciplines of kinesiology (e.g. history, biomechanics, philosophy, etc.) and discuss the knowledge specific to those areas.
D. demonstrate knowledge in related disciplines required as core preparation for kinesiology majors (e.g. chemistry, biology, physics, statistics, etc.).
E. apply a variety of research methods to locate and use appropriate information from various sources.

Kinesiology is the academic discipline focusing on the study of all aspects of human movement. Programs of study at the baccalaureate level include exercise science, sports management, allied health profession preparation, and pursuit of a teaching credential to become a secondary school teacher/coach.

The associate in arts in kinesiology for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education-Breadth pattern (CSU GE-Breadth, or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of C or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Students must complete each course used to meet a major requirement with a “C” grade or higher. Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60-unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

major requirements: units
BIOSC-139 Human Anatomy ........................................... 5
BIOSC-140 Human Physiology ........................................... 5
KINES-210 Introduction to Kinesiology .................................. 3

plus a minimum of 6 units from:
BUS-240 Business Statistics ............................................. 3
or
MATH-142 Elementary Statistics with Probability .................. 4
BIOSC-117 Human Biology with Laboratory ......................... 4
CHEM-120 General College Chemistry I ............................... 5
HSCI-230 Advanced First Aid/CPR ..................................... 3
PHYS-120 General College Physics ..................................... 4
or
PHYS-130 Physics for Engineers and Scientists A-Mechanics and Wave Motion ..................................... 4

plus at least 3 units from:
Maximum of one course (minimum one unit) from any three of the following areas:

Aquatics
KNACT-100A Beginning Swimming .................................. 0.5-2
KNACT-102A Beginning Aquatic Fitness ................................ 0.5-2
KNACT-104 Water Aerobics ............................................. 0.5-2

Fitness
KNACT-110A Beginning Hatha Yoga .................................. 0.5-2
KNACT-126 Aerobics/Step Aerobics .................................... 0.5-2
KNACT-128A Beginning Cardio Kickboxing ......................... 0.5-2
KNACT-130A Beginning Fitness Walking ............................. 0.5-2
KNACT-134A Beginning Fitness Jogging ............................. 0.5-2
KNACT-148A Beginning Power Lifting ............................... 0.5-2
KNDAN-105A Pilates Mat Work I ..................................... 0.5-2

Individual sports
KNACT-160A Beginning Badminton .................................... 0.5-2
KNACT-162 Bowling .................................................... 0.5-2
KNACT-164A Beginning Golf .......................................... 0.5-2
KNACT-164B Intermediate Golf ...................................... 0.5-2
KNACT-166 Tennis .................................................... 0.5-2

Team sports
KNACT-170A Beginning Basketball .................................... 0.5-2
KNACT-172 Flag Football ............................................... 0.5-2
KNACT-176A Beginning Soccer ....................................... 0.5-2
KNACT-182A Beginning Volleyball .................................... 0.5-2
KNACT-182B Intermediate Volleyball ................................ 0.5-2
KNACT-182C Advanced Volleyball ................................... 0.5-2

Combatives
KNCCMB-110 Self Defense ........................................... 0.5-2
KNCCMB-118A Beginning Taekwondo ................................. 0.5-2
KNCCMB-126A Beginning Aikido ................................... 0.5-2
KNCCMB-134 Karate .................................................... 0.5-2

Dance
KNDAN-100 Introduction to Dance ..................................... 0.5-2
KNDAN-164A Ballroom/Social Dance I ............................... 0.5-2

total minimum required units 22-25
Certificate of achievement
Coaching

Students completing the program will be able to...
A. develop practice plans, analyze strategy and teach techniques specific to a chosen sport.
B. incorporate concepts of an athlete’s psychological and physical health to improve performance.
C. Students completing this program will be able to develop an educational and career plan matched to their skills, aptitudes and professional requirements.

The coaching certificate of achievement is a one-year course of study that prepares students to be an effective recreational, youth or secondary school coach. Specific sport options offered include baseball, basketball, cross-country, football, soccer, softball, swimming, tennis, track and field, volleyball and water polo. To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher.

**required courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>KNICA-200</td>
<td>Introduction to Sports Medicine and Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-201</td>
<td>Principles of Optimizing Human Performance</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-202</td>
<td>Exercise Techniques and Fitness Assessments</td>
<td>1</td>
</tr>
<tr>
<td>KNICA-203</td>
<td>Sport and Exercise Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

**plus at least 3 units from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>KINES-250</td>
<td>Theory of Coaching Team Sports</td>
</tr>
<tr>
<td>KINES-254</td>
<td>Theory of Coaching Football</td>
</tr>
</tbody>
</table>

**plus at least 3 units from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>KINES-234</td>
<td>Advanced First Aid/CRP</td>
<td>3</td>
</tr>
<tr>
<td>KINES-244</td>
<td>Theory of Coaching Individual Sports</td>
<td>3</td>
</tr>
<tr>
<td>KINES-246</td>
<td>Theory of Coaching Football</td>
<td>3</td>
</tr>
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</table>

**plus at least 2 units from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNACT-100A</td>
<td>Beginning Swimming</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-100B</td>
<td>Intermediate Swimming</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-164A</td>
<td>Beginning Golf</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-164B</td>
<td>Intermediate Golf</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-166</td>
<td>Tennis</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-170A</td>
<td>Beginning Basketball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-170B</td>
<td>Intermediate Basketball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-174A</td>
<td>Beginning Men’s Lacrosse</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-174B</td>
<td>Intermediate Men’s Lacrosse</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-176A</td>
<td>Beginning Soccer</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-176B</td>
<td>Intermediate Soccer</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-182A</td>
<td>Beginning Volleyball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-182B</td>
<td>Intermediate Volleyball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-182C</td>
<td>Advanced Volleyball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-195A</td>
<td>Beginning Plyometrics and Agility Training for Female Athletes</td>
<td>0.25-1</td>
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<tr>
<td>KNACT-195B</td>
<td>Intermediate Plyometrics and Agility Training for Female Athletes</td>
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<tr>
<td>KNACT-195C</td>
<td>Advanced Plyometrics and Agility Training for Female Athletes</td>
<td>0.25-1</td>
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**or at least 2 units from:**

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>KNICA-199</td>
<td>Sport-Specific Athletic Conditioning</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNICA-200</td>
<td>Intercollegiate Baseball, Men</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-202A</td>
<td>Intercollegiate Basketball-A, Men</td>
<td>2</td>
</tr>
<tr>
<td>KNICA-202B</td>
<td>Intercollegiate Basketball-B, Men</td>
<td>1</td>
</tr>
<tr>
<td>KNICA-203A</td>
<td>Intercollegiate Basketball-A, Women</td>
<td>2</td>
</tr>
<tr>
<td>KNICA-203B</td>
<td>Intercollegiate Basketball-B, Women</td>
<td>1</td>
</tr>
<tr>
<td>KNICA-206</td>
<td>Intercollegiate Football, Men</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-210</td>
<td>Intercollegiate Soccer, Women</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-215</td>
<td>Intercollegiate Softball, Women</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-216</td>
<td>Intercollegiate Swimming and Diving, Men</td>
<td>3</td>
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<td>Intercollegiate Swimming and Diving, Women</td>
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</tr>
<tr>
<td>KNICA-223</td>
<td>Intercollegiate Volleyball, Women</td>
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<tr>
<td>KNICA-224</td>
<td>Intercollegiate Water Polo, Men</td>
<td>3</td>
</tr>
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<td>KNICA-225</td>
<td>Intercollegiate Water Polo, Women</td>
<td>3</td>
</tr>
</tbody>
</table>

*Activity courses or intercollegiate athletic participation must be in the selected area of coaching emphasis.

**total minimum required units**: 21

Certificate of achievement
Personal training

Students completing the program will be able to...
A. conduct assessment of personal fitness levels.
B. develop a conditioning program to improve conditioning levels utilizing the periodization model.
C. design a conditioning program to meet the unique needs of special populations.
D. take the NASI-VI, AFAA or other national certification exam.

The personal training certificate program is a one-year course of study that will expose students to many facets of the fitness industry and prepares them to obtain entry-level employment as a personal trainer. Completion of the certificate requirements will also prepare students to sit for national personal training examinations.

To earn a certificate of achievement, a student must complete each course used to meet a certificate requirement with a grade of “C” or higher. Courses are available in the day and evening.

**required courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSCI-230</td>
<td>Advanced First Aid/CRP</td>
<td>3</td>
</tr>
<tr>
<td>KINES-234</td>
<td>Introduction to Sports Medicine and Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>KINES-240</td>
<td>Principles of Optimizing Human Performance</td>
<td>3</td>
</tr>
<tr>
<td>KINES-242</td>
<td>Exercise Techniques and Fitness Assessments</td>
<td>1</td>
</tr>
<tr>
<td>KINES-246</td>
<td>Sport and Exercise Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

**plus at least 3 units from:**

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>KINES-250</td>
<td>Theory of Coaching Team Sports</td>
</tr>
<tr>
<td>KINES-254</td>
<td>Theory of Coaching Football</td>
</tr>
</tbody>
</table>

**plus at least 3 units from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNACT-100A</td>
<td>Beginning Swimming</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-100B</td>
<td>Intermediate Swimming</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-164A</td>
<td>Beginning Golf</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-164B</td>
<td>Intermediate Golf</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-166</td>
<td>Tennis</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-170A</td>
<td>Beginning Basketball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-170B</td>
<td>Intermediate Basketball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-174A</td>
<td>Beginning Men’s Lacrosse</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-174B</td>
<td>Intermediate Men’s Lacrosse</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-176A</td>
<td>Beginning Soccer</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-176B</td>
<td>Intermediate Soccer</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-182A</td>
<td>Beginning Volleyball</td>
<td>0.5-2</td>
</tr>
<tr>
<td>KNACT-182B</td>
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<td>0.25-1</td>
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**or at least 2 units from:**

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<tr>
<td>KNICA-200</td>
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<tr>
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<td>Intercollegiate Basketball-A, Men</td>
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<tr>
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<td>Intercollegiate Basketball-B, Men</td>
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</tr>
<tr>
<td>KNICA-203A</td>
<td>Intercollegiate Basketball-A, Women</td>
<td>2</td>
</tr>
<tr>
<td>KNICA-203B</td>
<td>Intercollegiate Basketball-B, Women</td>
<td>1</td>
</tr>
<tr>
<td>KNICA-206</td>
<td>Intercollegiate Football, Men</td>
<td>3</td>
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<tr>
<td>KNICA-210</td>
<td>Intercollegiate Soccer, Women</td>
<td>3</td>
</tr>
<tr>
<td>KNICA-215</td>
<td>Intercollegiate Softball, Women</td>
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</tr>
<tr>
<td>KNICA-216</td>
<td>Intercollegiate Swimming and Diving, Men</td>
<td>3</td>
</tr>
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<td>KNICA-217</td>
<td>Intercollegiate Swimming and Diving, Women</td>
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<tr>
<td>KNICA-223</td>
<td>Intercollegiate Volleyball, Women</td>
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<td>KNICA-224</td>
<td>Intercollegiate Water Polo, Men</td>
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<tr>
<td>KNICA-225</td>
<td>Intercollegiate Water Polo, Women</td>
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*Activity courses or intercollegiate athletic participation must be in the selected area of coaching emphasis.

**total minimum required units**: 21
Kinesiology

plus at least 3 units from:
NUTRI-115 Nutrition and Health: Personal Applications ........ 3
NUTRI-120 Sports Nutrition: Fueling the Athlete.................. 3
NUTRI-160 Nutrition: Science and Applications .................. 3

plus at least 1 unit from:
KNACT-146A Theory and Practice of Strength....................... 0.5-2
KNACT-146B Theory and Practice of Strength....................... 0.5-2
KNACT-146C Theory and Practice of Strength....................... 0.5-2
KNACT-146D Theory and Practice of Strength....................... 0.5-2
KNACT-148A Beginning Power Lifting.................................. 0.5-2

plus at least 1 unit from:
KNACT-110A Beginning Hatha Yoga.................................. 0.5-2
KNACT-110B Intermediate Hatha Yoga................................. 0.5-2
KNACT-110C Advanced Hatha Yoga.................................. 0.5-2
KNACT-111A Beginning Stretch and Yoga for Sports............. 0.5-2
KNACT-111B Intermediate Stretch and Yoga for Sports.......... 0.5-2

KNTC-120 Physical Fitness................................................. 0.5-2
KNACT-122A Beginning Body Sculpt.................................. 0.5-2
KNACT-124A Beginning Hip, Thighs and Abs...................... 0.5-2
KNACT-124B Intermediate Hip, Thighs and Abs.................... 0.5-2
KNACT-126 Aerobics/Step Aerobics.................................. 0.5-2
KNACT-128A Beginning Cardio Kickboxing........................ 0.5-2
KNACT-128B Intermediate Cardio Kickboxing...................... 0.5-2
KNACT-140 Stationary Cycling........................................... 0.5-2
KNACT-142A Beginning Boot Camp................................... 0.5-2
KNACT-144A Beginning Super Circuit................................. 0.5-2
KNACT-144B Intermediate Super Circuit............................ 0.5-2
KNDAN-105A Pilates Mat Work I........................................ 0.5-2

KINES-210 Introduction to Kinesiology
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This is an introductory course that surveys various subdisciplines related to the study of human movement. Students will examine the areas of history, sociology, biomechanics, physiology, and psychology, as they relate to the sport and exercise environment. In addition, students will explore three career pathways involving the study of human movement; teaching, research, and professional practice. The course also introduces students to the concepts and skills of locating, evaluating, synthesizing, and communicating information in various formats. C-ID KIN 100, CSU, UC (credit limits may apply to UC - see counselor)

KINES-220 Introduction to Sport and Recreation Management
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This is an introductory course in sport and recreation management. Students will examine the history and development of the profession, discover and evaluate a variety of career opportunities, discuss organizational and managerial strategies, and analyze current trends in sport and recreation management. CSU

KINES-222 Practical Experience in Sport and Recreation Management I
4 units SC
• 36 hours lecture/108 hours laboratory by arrangement per term
• Recommended: KINES-220 or equivalent
This is an internship course that will expose students to the practical application and responsibilities within the field of sport and recreation management. They will have the opportunity to assist within the Diablo Valley College Kinesiology, Athletics, and Dance Department on a variety of projects including marketing, game management, website management, sports information, fundraising, and/or scheduling. CSU

KINES-223 Practical Experience in Sport and Recreation Management II
4 units SC
• 36 hours lecture/108 hours laboratory by arrangement per term
• Prerequisite: KINES-222 or equivalent
This is an internship course that continues to enhance students’ skills and practical experiences within the field of sport and recreation management. Students will participate in creating and implementing projects within the Diablo Valley College Kinesiology, Athletics, and Dance Department. Topics for projects include, but are not limited to, marketing, game management, website management, sports information, fundraising, and/or scheduling. CSU
KINES-230 Overview of Sports Medicine and Fitness Professions
2 units  SC

This course will acquaint students with a variety of sports medicine, fitness and health care professions. Information presented will include job descriptions, educational and certification/licensure requirements, work environment and potential salary ranges. CSU

KINES-232 Introduction to Sports Massage
1.5 units  SC

• 18 hours lecture/27 hours laboratory per term

This course will present the theory and practice of massage and its role in treating and preventing athletic injuries as well as preparing athletes for competition. Students will apply and experience the application of a variety of massage, stretching and relaxation techniques. CSU

KINES-234 Introduction to Sports Medicine and Athletic Training
3 units  SC

• 36 hours lecture/54 hours laboratory per term

• Recommended: Eligibility for ENGL-122 or equivalent

This course will provide the future coach, athletic trainer and other health care providers with the basic theoretical knowledge and practical skills necessary for the proper and effective management of common injuries. The students will also develop the ability to recognize these injuries, manage emergency situations and apply preventative taping. CSU, UC (credit limits may apply to UC - see counselor)

KINES-235 Advanced Sports Medicine and Athletic Training
3 units  SC

• 36 hours lecture/54 hours laboratory per term

• Prerequisite: KINES-234 or equivalent

This course builds on concepts from KINES-234. It will introduce the student to the theoretical knowledge and practical skills necessary to evaluate and rehabilitate injuries. The medical and surgical management of injuries will also be discussed in presentations by orthopedic surgeons and podiatrists. CSU

KINES-236 Clinical Experiences in Sports Medicine and Athletic Training I
2 units  SC

• 108 hours laboratory by arrangement per term

• Prerequisite: KINES-234 or completion of one year high school ROP sports medicine or equivalent

This course will expose students to basic injury prevention and care. The student will observe and assist athletic trainers in administering health care to the DVC athletes. Skills to be learned and performed include prophylactic taping and wrapping, immediate injury management and modality application. CSU

KINES-237 Clinical Experiences in Sports Medicine and Athletic Training II
2 units  SC

• 108 hours laboratory by arrangement per term

• Prerequisite: KINES-235 (may be taken concurrently) and KINES-236 or equivalents

This course will expose students to injury evaluation and career exploration in the area of sports medicine. Students will observe and assist athletic trainers in evaluating and treating DVC athletes. This may be augmented by off-campus observations of physicians and/or other health care providers. CSU

KINES-238 Clinical Experiences in Sports Medicine and Athletic Training III
2 units  SC

• 108 hours laboratory by arrangement per term

• Prerequisite: KINES-237 or equivalent

This course will expose the student to advanced athletic injury evaluation and anatomy. The emphasis in this course will be problem solving and professional development. The student will observe and assist athletic trainers in evaluating and rehabilitating DVC student athletes. This may be augmented by off-campus observations of surgery. CSU

KINES-239 Clinical Experiences in Sports Medicine and Athletic Training IV
2 units  SC

• 108 hours laboratory by arrangement per term

• Prerequisite: KINES-238 or equivalent

This course will expose the student to advanced injury rehabilitation principles and clinical intervention techniques. The emphasis in this course will be problem solving and professional development. Students will observe and assist athletic trainers in evaluating and rehabilitating DVC student athletes. This may be augmented by off-campus observations of surgery. CSU

KINES-240 Principles of Optimizing Human Performance
3 units  SC

• 54 hours lecture per term

• Recommended: Eligibility for ENGL-122 or equivalent

This course explores the body’s adaptations to exercise and teaches students how to develop fitness programs to maximize these strength and conditioning adaptations. The information presented is valuable for students interested in professions such as personal training, physical therapy, athletic training/sports medicine, teaching and coaching, as well as for people who just want to improve their own fitness level or athletic performance. This knowledge will also prepare students intending to sit for national personal training exams. CSU, UC (credit limits may apply to UC - see counselor)
KINES-242  Exercise Techniques and Fitness Assessments
1 unit  SC
• 54 hours laboratory per term
• Recommended: KINES-240 or equivalent (may be taken concurrently)

This course is a companion laboratory course to KINES-240. Students will practice the instruction of proper techniques of strength training and fitness conditioning. Students will also conduct fitness assessments to determine fitness levels and evaluate progress in exercise programs. These skills will assist students who plan to sit for a national personal training or athletic training examination. CSU, UC (credit limits may apply to UC - see counselor)

KINES-246  Sport and Exercise Psychology
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course addresses the scientific approach to the psychological component of sport and exercise performance. Topics such as personality, motivation, group dynamics, and leadership will be covered. Specific psychological skills training methods for enhancing performance will be discussed. In addition, the connection between sport and exercise participation to health, wellness and psychological development will be addressed. CSU

KINES-248  Sport and Society
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course is intended to develop an understanding and recognition of the many ways sport and society interact and affect one another. The process of socialization as well as the roles of violence, gender, race, media, and politics within the realm of sport will be examined. Considerations of pertinent current events and scholarly journal articles will enhance students’ understanding of the topics addressed. CSU, UC

KINES-250  Professional Aspects of Personal Training
3 units  SC
• 54 hours lecture per term
• Recommended: KINES-240 or equivalent

This course is for students who are, or aspire to be, personal trainers. It will provide practical information on how to become nationally certified as a personal trainer, effectively work with clients, including those within special populations, conduct assessments and create appropriate fitness program design. CSU

KINES-252  Professional Aspects of Group Personal Training
1.5 units  SC
• 18 hours lecture/27 hours laboratory per term
• Recommended: KINES-240 or equivalent

This course prepares the potential personal trainer and group exercise instructor for the practical aspects of training and managing clients in a small group fitness/weight training setting. Principles and management of appropriate progression, regression and modification will be emphasized. Program design, exercise sequencing, training variables, use of strength equipment/modalities and practical teaching skills will be included. CSU

KINES-254  Practical Experience in Personal Training and Fitness Instruction I
4 units  SC
• 36 hours lecture/108 hours laboratory by arrangement per term
• Prerequisite: KINES-240 (may be taken concurrently) or equivalent

This is an internship course that will expose students to the practical application and responsibilities of personal training through the observation and assistance of a fitness professional. Students will observe and conduct assessments on clients for fitness programs and program design development. Also included will be the observation of the adaptation/adjustment (appropriate progressions/regressions) of fitness program specifics to meet the changing needs of the client’s fitness level and risk factor management and development of long and short term fitness goals. CSU

KINES-255  Practical Experience in Personal Training and Fitness Instruction II
4 units  SC
• 36 hours lecture/108 hours laboratory by arrangement per term
• Prerequisite: KINES-240 (may be taken concurrently) and KINES-250 (may be taken concurrently) or equivalents

This is an internship course that will expose students to the practical application and responsibilities of personal training. Students will perform assessments on individuals for fitness programs, prepare and execute fitness programs, adapt and adjust fitness program specifics to meet the changing needs of the client’s fitness level and risk factor management, as well as assist other entry students (mentoring) in the development of long and short term fitness goals and appropriate program design. CSU
KINES-256  Theory and Practice of Performance Exercise Training and Exam Prep.

2 units  SC
• 36 hours lecture per term
• Recommended: KINES-240 and KINES-250 or equivalents

This course is for personal trainers, athletic trainers and coaches to advance their knowledge in the area of performance exercise. Emphasis will be on the theory of, assessment techniques for and corrective strategies for improving human performance. Students may be able to earn continuing education units (CEUis) and/or sit for a national examination in performance exercise. CSU

KINES-257  Theory and Practice of Corrective Exercise Training and Exam Prep.

2 units  SC
• 36 hours lecture per term
• Recommended: KINES-240 and KINES-250 or equivalents

This course is for personal trainers, athletic trainers, and coaches to advance their knowledge in the area of corrective exercise. Emphasis will be on the theory of, assessment techniques for and corrective strategies for human movement. Students may be able to earn continuing education units (CEUis) and/or sit for a national examination in corrective exercise. CSU

KINES-258  Personal Training National Exam Preparation

2 units  SC
• 36 hours lecture per term
• Recommended: KINES-250 or equivalent

This course is designed to provide students with the information necessary to sit for a National Personal Training Exam. The course will expand upon information presented in other personal training courses within the program to emphasize knowledge required for passing these exams. CSU

KINES-260  Theory of Coaching Individual Sports

3 units  SC
• 54 hours lecture per term

This course is designed to provide students with an understanding of all facets of coaching individual sports. Topics will include methods of instruction, practice design, mental preparation, and program building. This course is appropriate for those looking for a career in coaching, current youth coaches and the athlete wanting to increase their knowledge of the sport. No previous coaching experience is necessary. CSU, UC (credit limits may apply to UC - see counselor)

KINES-262  Theory of Coaching Team Sports

3 units  SC
• 54 hours lecture per term

This course is designed to provide students with an understanding of all facets of coaching team sports. Topics will include methods of instruction, practice design, mental preparation, and program building. This course is appropriate for those looking for a career in coaching, current youth coaches and the athlete wanting to increase their knowledge of the sport. No previous coaching experience is necessary. CSU, UC (credit limits may apply to UC - see counselor)

KINES-264  Theory of Coaching Football

3 units  SC
• 54 hours lecture per term

This course is designed to provide students with an understanding of all facets of coaching football. The history, terminology, rules, strategies, skills, methods of instruction, conditioning, mental preparation, and program building will be covered. This course is appropriate for those looking for a career in coaching, current youth coaches and athletes wanting to increase their knowledge of the sport. No previous coaching experience is necessary. CSU, UC (credit limits may apply to UC - see counselor)

KINES-298  Independent Study

.5-3 units  SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

KINES-299  Student Instructional Assistant

.5-3 units  SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
**KINESIOLOGY ACTIVITY – KNACT**

Christine Worsley, Dean  
Kinesiology, Athletics and Dance Division  
Kinesiology Office Building, Room 104

**Limitations on enrollment**

Effective fall term 2013, changes to the regulations that govern community college enrollments placed limitations on the number of courses that students may take in certain disciplines within the Contra Costa Community College District. The charts below indicate which Diablo Valley College (DVC) courses are assigned to groups of courses (“families”) for which limitations have been imposed. Certain courses within certain “families” may be repeated (see catalog description), however, students are limited to four enrollments within the family. Certain DVC courses are equivalent to courses at Los Medanos College and Contra Costa College. An enrollment in an equivalent course at one of those colleges will count toward the allowable four enrollments within the family.

NOTE: Diablo Valley College may offer experimental or topics courses. When appropriate, based on content, such courses will be assigned to a “family” and that enrollment will be counted as an experience within the “family”.

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<thead>
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<tbody>
<tr>
<td>KNACT-100A</td>
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<tr>
<td>KNACT-132</td>
<td>Hiking</td>
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<td>Beginning Fitness Jogging</td>
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<td>KNACT-136</td>
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<td>KNACT-160A</td>
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</table>
Family: Bowling
KNACT-162 Bowling

Family: Basketball
KNACT-170A Beginning Basketball
KNACT-170B Intermediate Basketball

Family: Football
KNACT-172 Flag Football

Family: Lacrosse
KNACT-150D Intermediate Lacrosse
KNACT-174A Beginning Men's Lacrosse
KNACT-174B Intermediate Men's Lacrosse

Family: Soccer
KNACT-176A Beginning Soccer
KNACT-176B Intermediate Soccer
KNACT-178 Indoor Soccer

Family: Volleyball
KNACT-182A Beginning Volleyball
KNACT-182B Intermediate Volleyball
KNACT-182C Advanced Volleyball

KNACT-100A Beginning Swimming
.5-2 units SC
• Variable hours
This is an activity course designed to teach beginning level skill of swimming. Correct swimming technique for the freestyle and backstroke strokes will be emphasized. Instruction will also address personal swimming safety, swimming strength development, and health and fitness improvement through swimming. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-100B Intermediate Swimming
.5-2 units SC
• Variable hours
This is an activity course designed to teach intermediate level swimming skills. Correct swimming techniques for all four competitive swim strokes (freestyle, backstroke, breaststroke and butterfly) will be emphasized. Instruction will also include techniques of survival floating and the relationship between swimming and overall health and wellness. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-102A Beginning Aquatic Fitness
.5-2 units SC
• Variable hours
• Recommended: KNACT-100A or equivalent
This is an activity course designed to introduce students to the development of cardiovascular fitness and muscular strength through swimming workouts. Freestyle and backstroke strokes will be performed and utilized within both aerobic (long distance) and anaerobic (sprint distance) style fitness programs. Students will improve cardiovascular conditioning, upper and lower body muscular strength and core strength. Students will also gain knowledge in assessing fitness improvement through swimming participation. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-102B Intermediate Aquatic Fitness
.5-2 units SC
• Variable hours
• Recommended: KNACT-102A or equivalent
This is an activity course designed to develop an intermediate level of cardiovascular fitness and muscular strength through swimming workouts. All four competitive strokes (freestyle, backstroke, breaststroke and butterfly) will be performed and utilized within both aerobic (long distance) and anaerobic (sprint distance) style fitness programs. Students will improve cardiovascular conditioning, upper and lower body muscular strength and core strength. Students will apply their knowledge of swimming fitness assessment and training principles to the development of a personal swimming fitness program. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-104 Water Aerobics
.5-2 units SC
• Variable hours
This is an activity course designed to improve muscular strength, flexibility and cardiovascular fitness, while reducing stress on the body by performing exercises in the water. Exercises will involve variations in movement and tempo to achieve fitness improvements. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-110A Beginning Hatha Yoga
.5-2 units SC
• Variable hours
This is a beginning level activity course exploring the principles of Hatha Yoga and how they apply to achieving lifetime fitness. It incorporates yoga postures (asanas) designed to strengthen and tone the body. Breathing exercises, relaxation and meditation techniques are learned and practiced throughout the course. CSU, UC (credit limits may apply to UC - see counselor)
KNACT-110B Intermediate Hatha Yoga
.5-2 units SC
• Variable hours
This is an intermediate level activity course that emphasizes intense stretching, balancing, and building of muscular strength through yoga practice. A series of poses and breathing techniques will be practiced in order to create a more challenging yoga experience. Proper posture, relaxation and meditation techniques, as well as principles of healthy living, will be demonstrated and discussed throughout the course. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-110C Advanced Hatha Yoga
.5-2 units SC
• Variable hours
This is an advanced level activity course that incorporates Hatha Yoga principles and practices with students' physical and emotional needs resulting in a more integrated understanding of the benefits of yoga. Various meditation and yoga styles will be studied, practiced and analyzed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-114A Beginning Stretch and Yoga for Sports
.5-2 units SC
• Variable hours
This is a beginning level activity course introducing principles of yoga asanas, stretch and relaxation techniques, as related to a particular sport or activity. Students will practice beginning level warm-up activities, flexibility and stretching exercises, for the primary purpose of preventing injury in their particular sport/activity. Students will learn methods for measuring changes in flexibility and alignment. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-114B Intermediate Stretch and Yoga for Sports
.5-2 units SC
• Variable hours
This is a course presenting intermediate principles of stretch technique, intermediate yoga asanas, and imagery techniques, as related to a particular sport or activity. Students will participate in intermediate level warm-up activities, intermediate flexibility and strengthening exercises, and injury prevention methods, with the goal of enhancing sport/activity performance. Students will utilize flexibility and alignment measurements for the development of an individualized stretch program. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-120 Physical Fitness
.5-2 units SC
• Variable hours
This is an activity course designed to improve physical fitness through participation in flexibility routines, resistance training, core strengthening, and cardiovascular exercise. Fitness training that benefits a particular sport or activity, as well as, the benefits of physical fitness as an aspect of overall well-being, are addressed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-122A Beginning Body Sculpt
.5-2 units SC
• Variable hours
This is an activity course designed to teach beginning elements of body sculpt. Body sculpt is guided strength training, core stabilization and balance exercises performed to a specific music cadence and designed to improve muscular strength, muscular endurance and flexibility. Introductory technique will be emphasized and basic training elements will be developed. Fitness assessments will be performed and nutritional/wellness topics will also be discussed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-122B Intermediate Body Sculpt
.5-2 units SC
• Variable hours
This is an activity course designed to teach intermediate elements of body sculpt. Body sculpt is guided strength training, core stabilization and balance exercises performed to a specific music cadence. This course is designed to improve muscular strength, muscular endurance, balance, body stabilization and flexibility. Intermediate techniques and exercise routines will be developed by students. Fitness assessments will be performed and nutritional/wellness topics will be expanded. Students will keep a journal of their individual exercise routines and nutritional intake. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-124A Beginning Hips, Thighs and Abs
.5-2 units SC
• Variable hours
This is an activity course emphasizing a beginning level of toning and strengthening of the hip, thigh, and abdominal areas. A basic level of anatomy will be included. Various beginning conditioning techniques and modalities will be utilized including, but not limited to, speed walking, body resistance activities and basic use of resistance tubing. CSU, UC (credit limits may apply to UC - see counselor)
KNACT-124B  Intermediate Hips, Thighs and Abs
.5-2 units  SC
• Variable hours
This is an activity course emphasizing an intermediate level of toning and strengthening of the hip, thigh, and abdominal areas. An intermediate level of muscle tone development and progressive levels of muscle physiology, will be included. A variety of measured conditioning techniques and modalities will be utilized including, but not limited to, running, bender balls, stability balls and Pilates rings. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-125  Zumba
.5-2 units  SC
• Variable hours
This is an activity course designed to improve aerobic fitness, muscular endurance and muscular strength by utilizing Zumba dance fitness routines. Zumba is a fitness program that incorporates international music and dance steps. Flexibility training, core strengthening and topics concerning fitness principles and overall well-being will also be incorporated. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-126  Aerobics/Step Aerobics
.5-2 units  SC
• Variable hours
This is an activity course designed to improve aerobic cardiorespiratory fitness utilizing a variety of current aerobic fitness training formats including choreographed and non-choreographed floor movement patterns, step training, and aerobic interval training. Muscle endurance, flexibility training, core strengthening and discussion of the science of aerobic fitness will be incorporated. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-128A  Beginning Cardio Kickboxing
.5-2 units  SC
• Variable hours
• Note: Ability to participate in vigorous activity is recommended
This is an activity course that combines fundamental skills and technique from boxing, self defense and various forms of martial arts, such as, Karate and Muay Tai to promote a fun, yet effective and challenging aerobic workout. Jump rope and running will be primary cardiovascular activities. Basic flexibility, strength training, focus mitt training and muscular endurance activities may also be incorporated. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-128B  Intermediate Cardio Kickboxing
.5-2 units  SC
• Variable hours
• Note: Ability to participate in vigorous activity is recommended
This is an activity course that combines intermediate skills and technique from boxing, self defense and various forms of martial arts, such as, Karate and Muay Tai to promote a fun, yet effective and challenging aerobic workout. Jump rope and running will be primary cardiovascular activities. Flexibility, strength training, focus mitt training and muscular endurance activities may also be incorporated. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-130A  Beginning Fitness Walking
.5-2 units  SC
• Variable hours
This is an activity course intended for students of beginning fitness levels who would like to utilize walking as a fitness enhancing activity. Introductory technique will be emphasized and basic walking programs will be developed. Walking routes begin on campus and explore a multitude of nearby parks and trails. Topics to be discussed include: fitness and health assessment, equipment and safety, walking techniques, motivation, nutrition basics, program design and evaluation. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-130B  Intermediate Fitness Walking
.5-2 units  SC
• Variable hours
This is an activity course intended for students of intermediate fitness levels who would like to utilize walking as a fitness enhancing activity. Intermediate techniques will include distance, hill, backward, and speed walking. Intermediate walking programs will be developed. Walking routes begin on campus and explore a multitude of nearby parks and trails. Topics to be discussed include: fitness and health assessment, equipment and safety, walking techniques, motivation, nutrition basics, program design, evaluation, Volkssporting and Volksmarching. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-132  Hiking
.5-2 units  SC
• Variable hours
This is an activity course utilizing hiking as a means to improve health and fitness. Hiking and safety skills will be practiced while enjoying the beautiful parks and open spaces of the Bay Area. Hike preparation, map reading, trail marking skills, and the health and fitness benefits of hiking will be addressed. All routes are four to ten miles long at various hiking sites and are often on hilly terrain. CSU, UC (credit limits may apply to UC - see counselor)
KNACT-134A  Beginning Fitness Jogging  
.5-2 units  SC  
•  Variable hours  
This is an activity course which is designed to teach basic concepts and elements of jogging, including form and technique. The sport of running, warm up techniques, drills, safety and nutrition information, as it relates to jogging and/or running will also be discussed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-134B  Intermediate Fitness Jogging  
.5-2 units  SC  
•  Variable hours  
This is an activity course which is designed to teach intermediate concepts and elements of jogging, including form and technique. The sport of running, as well as safety and nutrition information as it relates to jogging/running will also be discussed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-136  Distance Track Training  
.5-2 units  SC  
•  Variable hours  
This is an activity course in distance running, interval and track training methods. Warm-up, stretching, interval training, cool down and recovery will be covered, as well as, information on types of racing, race strategies and techniques. Other topics to be explored include history, equipment, safety, assessing cardiovascular effects, and the value of interval training in distance running. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-140  Stationary Cycling  
.5-2 units  SC  
•  Variable hours  
This is an activity course using group stationary cycling training to develop cardiovascular fitness. Students will also utilize various strength and flexibility modalities, mental imagery, visualization, nutrition concepts, as well as assessments of their cardiovascular fitness training level through heart rate monitoring and resting heart rate values. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-142A  Beginning Boot Camp  
.5-2 units  SC  
•  Variable hours  
•  Note: Students must be healthy enough to participate in vigorous physical activity.  
This is an activity course that incorporates a total body workout with minimal rest in between a given set of exercises. Cardiovascular endurance, core exercises, muscular strength, muscular endurance, body weight exercises, and free weights will be combined to assist students in achieving fitness goals. Flexibility exercises, nutritional information, and fitness principles will also be presented. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-144A  Beginning Super Circuit  
.5-2 units  SC  
•  Variable hours  
This is an activity course introducing the basic elements of cardiovascular fitness, muscular strength, muscular endurance, and flexibility in a unique and simultaneous combination of aerobic and resistance training exercises in one seamless total fitness workout. Individual health and fitness assessments will be conducted during the semester. Nutrition and other wellness topics will also be included. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-144B  Intermediate Super Circuit  
.5-2 units  SC  
•  Variable hours  
This is an activity course for intermediate level students participating in a unique and simultaneous combination of aerobic and resistance training exercises in one seamless total fitness workout utilizing elements of cardiovascular fitness, muscular strength, muscular endurance, and flexibility. Individual health and fitness assessments will be conducted during the semester. Nutrition and other wellness topics will also be included. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-146A  Theory and Practice of Strength Training and Fitness I  
.5-2 units  SC  
•  Variable hours  
This is an activity course designed to increase muscular strength, muscular endurance, and fitness utilizing introductory resistance techniques and equipment training. Endurance training activities will also be included. Students will be instructed on information pertaining to safety, warm-up, and musculoskeletal anatomy. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-146B  Theory and Practice of Strength Training and Fitness II  
.5-2 units  SC  
•  Variable hours  
This is an activity course designed to increase muscular strength, muscular endurance, and fitness utilizing beginning level strength training techniques, equipment, and endurance training activities. Information on safety, warm-up, anatomy, and basic program design will also be presented. CSU, UC (credit limits may apply to UC - see counselor)
KNACT-146C  Theory and Practice of Strength Training and Fitness III  
.5-2 units  SC  
• Variable hours  
This is an activity course designed to increase muscular strength, muscular endurance, and fitness utilizing intermediate level strength training techniques, equipment, and endurance training activities. Students will work toward independent program design and implementation. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-146D  Theory and Practice of Strength Training and Fitness IV  
.5-2 units  SC  
• Variable hours  
This is an activity course designed to increase muscular strength, muscular endurance, and fitness utilizing advanced level strength training techniques, equipment, and endurance training activities. Students will be expected to design and implement independent programs. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-148A  Beginning Power Training  
.5-2 units  SC  
• Variable hours  
This is an activity course designed to teach the basic elements of power lifting. Technique will be emphasized and training programs will be developed. The sport of power lifting, as well as safety concerns will also be discussed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-148B  Intermediate Power Training  
.5-2 units  SC  
• Variable hours  
This is an activity course designed to teach intermediate elements of power lifting and training. Intermediate-level exercises will be emphasized and program design will be covered. The biomechanics of power training, as well as plyometric training will also be discussed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-150  Topics in Physical Activity  
.3-4 units  SC  
• Variable hours  
This is a supplemental activity course in physical activity to provide a study of current concepts and problems in fitness and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

KNACT-160A  Beginning Badminton  
.5-2 units  SC  
• Variable hours  
This is an activity course involving beginning badminton techniques and strategies. This course focuses on the history, rules, etiquette, equipment, and scoring system of badminton. In addition, students will develop stroke techniques, footwork skills, and knowledge of singles and doubles strategies. Offensive and defensive positions and basic team strategies are addressed. No previous badminton experience is necessary. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-160B  Intermediate Badminton  
.5-2 units  SC  
• Variable hours  
This is an activity course involving intermediate badminton techniques and strategies. This course focuses on the history, rules, etiquette, equipment, and scoring system of badminton. In addition, students will develop intermediate stroke techniques, footwork skills, and knowledge of singles and doubles strategies. Offensive and defensive positions and intermediate team strategies will be addressed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-162  Bowling  
.5-2 units  SC  
• Variable hours  
• Note: Mandatory fee required  
This is an activity course that focuses on the basic delivery technique, targeting, spare shooting and strategy of bowling. Additional topics include equipment, rules, etiquette, terminology and scoring. Students will have the opportunity to practice these techniques as well as participate in class competition. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-164A  Beginning Golf  
.5-2 units  SC  
• Variable hours  
• Note: Some class meetings will be held at Buchanan Field Golf Course to utilize their practice facilities  
This is an activity course designed to introduce the game of golf and provide the skill and knowledge necessary to successfully transition to playing golf on a course. Equipment selection will be covered as well as full swing fundamentals, ball flight principles, chipping, pitching and putting. CSU, UC (credit limits may apply to UC - see counselor)
KNACT-164B  Intermediate Golf  .5-2 units SC  
- Variable hours  
- Recommended: KNACT-164A or equivalent  
- Note: Mandatory fee required  
This is an activity course focusing on intermediate level golf skills. Primary participation is through playing nine holes of golf. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-166  Tennis  .5-2 units SC  
- Variable hours  
This is an activity course intended to introduce students to the game of tennis. The course will involve basic stroking methods, conditioning techniques, historical background, rules, scoring, as well as singles and doubles strategies. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-170A  Beginning Basketball  .5-2 units SC  
- Variable hours  
This is an activity course in basketball with an emphasis on beginning level techniques, rules of the full court game and cardiovascular conditioning. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-170B  Intermediate Basketball  .5-2 units SC  
- Variable hours  
This is an activity course in basketball with an emphasis on intermediate level techniques, rules of the full court game and cardiovascular conditioning. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-172  Flag Football  .5-2 units SC  
- Variable hours  
This is an activity course introducing students to the fundamentals of flag football. Rules of the game, safety, offensive and defensive skills, game strategy, and methods of scoring will also be addressed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-174A  Beginning Men's Lacrosse  .5-2 units SC  
- Variable hours  
This is an activity course emphasizing the fundamental skills and strategies of men's lacrosse. This course focuses on rules, etiquette, safety, and lacrosse skills, such as catching, passing, cradling, shooting, and defending. Offensive and defensive positions and basic team strategies are also addressed. No previous lacrosse experience is necessary. Open to men and women. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-174B  Intermediate Men's Lacrosse  .5-2 units SC  
- Variable hours  
This is an intermediate level activity course presenting skill and strategies of men's lacrosse. The course focuses on the application of the rules, etiquette, safety, and individual skills such as catching, passing, cradling, shooting, and defending to game play. Offensive and defensive team strategies are presented and implemented during the course. Open to men and women. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-176A  Beginning Soccer  .5-2 units SC  
- Variable hours  
This is an activity course involving beginning level skills and strategies of soccer. This course focuses on a beginning level of understanding of the rules, etiquette, safety, and soccer skills, such as dribbling, passing, shooting and defending. Offensive and defensive positions and basic team organization are also addressed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-176B  Intermediate Soccer  .5-2 units SC  
- Variable hours  
This is an activity course involving intermediate level skills and strategies of soccer. This course focuses on an intermediate level of application of the rules, etiquette, safety, and soccer skills, such as dribbling, passing, shooting and defending. Offensive and defensive team strategies and positioning are also addressed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-182A  Beginning Volleyball  .5-2 units SC  
- Variable hours  
This is an activity course designed to teach the student the beginning skills of volleyball and to incorporate them into successful non-competitive team play. CSU, UC (credit limits may apply to UC - see counselor)
KNACT-182B Intermediate Volleyball
.5-2 units SC
• Variable hours
• Formerly PE-193
This is an activity course focused on intermediate volleyball knowledge and skills. The course will develop a higher level of performance and the utilization of multi-optional volleyball strategies. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-182C Advanced Volleyball
.5-2 units SC
• Variable hours
This is an activity course that offers advanced volleyball students opportunities to analyze, evaluate and perform complex techniques. In addition, students will utilize advanced tactical drills and exercises in the development of game strategies. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-195A Beginning Plyometrics and Agility Training for Female Athletes
.25-1 unit SC
• Variable hours
• Note: This course is open to all students
This is an activity course involving beginning level plyometric and agility training for the female athlete. This course is designed to help improve performance and minimize the potential for injury. Beginning level training will include plyometric techniques, agility drills, flexibility exercises and core strengthening techniques. Fundamental health and nutritional issues specific to the female athlete will also be addressed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-195B Intermediate Plyometrics and Agility Training for Female Athletes
.25-1 unit SC
• Variable hours
• Note: This course is open to all students
This is an activity course involving intermediate level plyometric and agility training for the female athlete. The course is designed to further develop neuromuscular control thereby enhancing sport-specific performance and minimizing the potential for injury. Intermediate training will include more complex plyometric techniques, agility drills, flexibility exercises and core strengthening techniques. Further evaluation of health and nutritional issues specific to the female athlete will also be addressed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-195C Advanced Plyometrics and Agility Training for Female Athletes
.5-2 units SC
• Variable hours
• Note: This course is open to all students
This is an activity course involving an advanced level of plyometric and agility training for the female athlete. The course is designed to further advanced students’ neuromuscular control, thereby enhancing sport-specific performance and minimizing the potential for injury. Students will perform advanced levels of plyometric techniques, agility drills, flexibility exercises and core strengthening techniques. Health and nutritional issues specific to the female athlete will also be discussed. CSU, UC (credit limits may apply to UC - see counselor)

KNACT-298 Independent Study
.5-3 units SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

KNACT-299 Student Instructional Assistant
.5-3 units SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
KINESIOLOGY COMBATIVE - KNCMB

Christine Worsley, Dean
Kinesiology, Athletics and Dance Division
Kinesiology Office Building, Room 104

Limitations on enrollment
Effective fall term 2013, changes to the regulations that govern community college enrollments placed limitations on the number of courses that students may take in certain disciplines within the Contra Costa Community College District. The charts below indicate which Diablo Valley College (DVC) courses are assigned to groups of courses (“families”) for which limitations have been imposed. Certain courses within certain “families” may be repeated (see catalog description), however, students are limited to four enrollments within the family. Certain DVC courses are equivalent to courses at Los Medanos College and Contra Costa College. An enrollment in an equivalent course at one of those colleges will count toward the allowable four enrollments within the family.

NOTE: Diablo Valley College may offer experimental or topics courses. When appropriate, based on content, such courses will be assigned to a “family” and that enrollment will be counted as an experience within the “family”.

KINESIOLOGY
Family: Combatives
KNCMB-110 Self-Defense
KNCMB-114 Jujitsu
KNCMB-118A Beginning Taekwondo
KNCMB-118B Intermediate Taekwondo
KNCMB-118C Advanced Taekwondo
KNCMB-126A Beginning Aikido
KNCMB-126B Intermediate Aikido
KNCMB-128 Aikido Weapons-Jo and Bokken
KNCMB-130 Judo
KNCMB-134 Karate
KNCMB-150A Intermediate Taekwondo
KNCMB-150B Advanced Taekwondo

KNCMB-110 Self-Defense
.5-2 units SC
• Variable hours
This is an activity course that combines defensive techniques and concepts from jujitsu, judo, karate, and aikido. Students will explore self-defense techniques, as well as increase muscular fitness (strength, endurance, flexibility, and balance), improve self-discipline, focus, balance, relieve stress, and increase mental awareness. CSU, UC (credit limits may apply to UC - see counselor)

KNCMB-114 Jujitsu
.5-2 units SC
• Variable hours
This is an activity course involving the history, philosophy, techniques and safety aspects of jujitsu. This Japanese system of unarmed combat teaches students to yield to the opponent’s strength to gain a physical advantage. Students will learn jujitsu techniques, as well as increase cardiovascular and muscular fitness. CSU, UC (credit limits may apply to UC - see counselor)

KNCMB-118A Beginning Taekwondo
.5-2 units SC
• Variable hours
This is an activity course designed to teach beginning skills, the history, and philosophy of taekwondo, while increasing physical fitness and endurance. Special attention will be paid to safety procedures and injury prevention. Taekwondo is an ancient Korean martial art where students will learn the way of fist and foot. CSU, UC (credit limits may apply to UC - see counselor)

KNCMB-118B Intermediate Taekwondo
.5-2 units SC
• Variable hours
This is an activity course designed to teach intermediate taekwondo skills, including sparring techniques. Improvement of physical fitness and endurance will be emphasized with special attention paid to safety procedures and injury prevention. The history of taekwondo in the United States and an introduction to board-breaking techniques will be presented. CSU, UC (credit limits may apply to UC - see counselor)

KNCMB-118C Advanced Taekwondo
.5-2 units SC
• Variable hours
This is an activity course designed to teach advanced taekwondo skills for the student to develop powerful hand and kick striking techniques, as well as competition sparring strategies. Physical fitness and endurance will be further developed and special attention will be paid to safety procedures and injury prevention. Preparation for taekwondo competition will also be addressed. CSU, UC (credit limits may apply to UC - see counselor)

KNCMB-126A Beginning Aikido
.5-2 units SC
• Variable hours
This is an activity course involving the history, philosophy, techniques and safety aspects of aikido. This is a Japanese warrior art involving a noncompetitive, non-fighting discipline, that is comprised purely of defensive techniques and principles of movement. Students will learn fundamental aikido techniques, as well as increase cardiovascular and muscular fitness. CSU, UC (credit limits may apply to UC - see counselor)
KNCMB-126B Intermediate Aikido
.5-2 units SC
- Variable hours
- Recommended: KNCMB-126A or equivalent
This is an activity course focusing on an intermediate level of aikido practice. Students will explore more complex skills and techniques with an emphasis on increased pace, as well as continue to develop concentration and cardiovascular and muscular fitness. CSU, UC (credit limits may apply to UC - see counselor)

KNCMB-128 Aikido Weapons - Jo and Bokken
.5-2 units SC
- Variable hours
This is an activity course using Aikido weapons Jo (wooden staff) and Bokken (wooden sword.) The historical, philosophical, and safety aspects of Aikido weapons Jo and Bokken will also be explored. CSU, UC (credit limits may apply to UC - see counselor)

KNCMB-130 Judo
.5-2 units SC
- Variable hours
This is an activity course involving the history, philosophy, techniques and safety aspects of judo. Judo emphasizes throws and pins, self-discipline, punctuality, courtesy, and respect. Students will learn judo techniques, as well as increase cardiovascular and muscular fitness. CSU, UC (credit limits may apply to UC - see counselor)

KNCMB-134 Karate
.5-2 units SC
- Variable hours
This is an activity course involving the history, philosophy, techniques and safety aspects of Kajukembo Karate. This martial art form teaches the way of the “empty hand” using legs, arms and fists, as well as Kiai (expression of inner energy), which accompanies each action. Students will learn karate techniques, as well as increase cardiovascular and muscular fitness. CSU, UC (credit limits may apply to UC - see counselor)

KNCMB-150 Topics in Martial Arts and Combatives
.3-4 units SC
- Variable hours
A supplemental course is martial arts/combatives to provide a study of current concepts, movements and problems in combatives and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

KINESIOLOGY DANCE – KNDAN

Christine Worsley, Dean
Kinesiology, Athletics and Dance Division
Kinesiology Office Building, Room 104

Limitations on enrollment
Effective fall term 2013, changes to the regulations that govern community college enrollments placed limitations on the number of courses that students may take in certain disciplines within the Contra Costa Community College District. The charts below indicate which Diablo Valley College (DVC) courses are assigned to groups of courses (“families”) for which limitations have been imposed. Certain courses within certain “families” may be repeated (see catalog description), however, students are limited to four experiences within the family. Certain DVC courses are equivalent to courses at Los Medanos College and Contra Costa College. An enrollment in an equivalent course at one of those colleges will count toward the allowable four enrollments within the family.

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KINESIOLOGY

Family: Ballet
KNDAN-110A Ballet Fundamentals I
KNDAN-110B Ballet Fundamentals II
DANCE-212 Ballet I
DANCE-213 Ballet II
DANCE-214 Ballet III
DANCE-216 Pointe Technique

Family: Jazz
KNDAN-120A Jazz Dance Fundamentals I
KNDAN-120B Jazz Dance Fundamentals II
DANCE-222 Jazz Dance I
DANCE-223 Jazz Dance II
DANCE-224 Jazz Dance III

Family: Modern
KNDAN-130A Modern Dance Fundamentals I
KNDAN-130B Modern Dance Fundamentals II
DANCE-232 Modern Dance I
DANCE-233 Modern Dance II
DANCE-234 Modern Dance III

Family: Ballroom Dance
KNDAN-150A Argentine Tango
KNDAN-164A Ballroom/Social Dance I
KNDAN-166 Swing Dance
KNDAN-168A Salsa and Latin Dance I
KNDAN-168B Salsa and Latin Dance II
KNDAN-169A Argentine Tango
Family: Tap
KNDAN-160A Tap Dance I
KNDAN-160B Tap Dance II

Family: Dance Production
DANCE-150A Dance Production II
DANCE-242 Repertory Dance Production I
DANCE-244 Repertory Dance Production II
DANCE-246 Dance Production I
DANCE-248 Dance Production II
DANCE-256 Dance Production Choreography

Family: Dance Performance
DANCE-150B Dance Production II - Tech Week
DANCE-243 Repertory Dance Production I - Tech Week
DANCE-245 Repertory Dance Production II - Tech Week
DANCE-247 Dance Production I - Tech Week
DANCE-249 Dance Production II - Tech Week
DANCE-257 Dance Production Choreography - Tech Week

Family: Dance Survey
KNDAN-100 Introduction to Dance
KNDAN-162 Broadway Dance

Family: Urban Dance
KNDAN-150A Beginning Hip-Hop and Urban Funk
KNDAN-150B Intermediate Hip-Hop and Urban Funk
KNDAN-170A Hip-Hop and Urban Funk Dance I
KNDAN-170B Hip-Hop and Urban Funk Dance II

KNDAN-100 Introduction to Dance
.5-2 units SC
• Variable hours
This is an introductory dance course focusing on the development of coordination, rhythm, strength, flexibility, alignment, and basic dance movement combinations in a variety of genres. Basic musculoskeletal alignment, movement safety, and dance appreciation skills will also be covered. CSU, UC

KNDAN-105A Pilates Mat Work I
.5-2 units SC
• Variable hours
This is an activity course introducing basic mat exercises developed by Joseph Pilates focusing on intrinsic muscle groups. The class addresses individual needs, body alignment, and core strength development, with emphasis placed on back and abdominal strengthening. CSU, UC (credit limits may apply to UC - see counselor)

KNDAN-105B Pilates Mat Work II
.5-2 units SC
• Variable hours
• Recommended: KNDAN-105A or equivalent
This is an activity course introducing intermediate mat exercises developed by Joseph Pilates focusing on intrinsic muscle groups. The class addresses individual needs, body alignment, and core strength development, with emphasis placed on back and abdominal strengthening as it relates to intermediate level exercises. CSU, UC (credit limits may apply to UC - see counselor)

KNDAN-110A Ballet Fundamentals I
.5-2 units SC
• Variable hours
This is an introductory course in ballet techniques. This class will focus on ballet barre, center adagio, allegro work, and across-the-floor combinations. An introduction to the history of the genre and principles of ballet as an art form will also be included. CSU, UC

KNDAN-110B Ballet Fundamentals II
.5-2 units SC
• Variable hours
• Recommended: KNDAN-110A or equivalent
This is a beginning class in classical ballet techniques. The focus is on beginning barre, beginning center adagio and allegro work and beginning ballet movement combinations in the center. The course also explores the history of ballet and principles as a contemporary art form. CSU, UC

KNDAN-120A Jazz Dance Fundamentals I
.5-2 units SC
• Variable hours
This is an introductory course in jazz dance technique. The focus is on proper jazz dance alignment, center work and movement across the floor. Introduction to the history of jazz dance will also be covered. CSU, UC

KNDAN-120B Jazz Dance Fundamentals II
.5-2 units SC
• Variable hours
• Recommended: KNDAN-120A or equivalent
This is a beginning course in jazz dance technique. The focus is on proper jazz dance alignment, isolations and beginning jazz dance choreography. The evolution of jazz dance from African and Haitian dance to contemporary jazz dance technique will also be covered. CSU, UC
KNDAN-130A Modern Dance Fundamentals I
.5-2 units SC
• Variable hours
This is an introductory course in modern dance technique. The focus will be on the development of proper modern dance alignment, center work, and movement across the floor. An introduction to modern dance history will also be included. CSU, UC

KNDAN-130B Modern Dance Fundamentals II
.5-2 units SC
• Variable hours
• Recommended: KNDAN-130A or equivalent
This is a course in beginning modern dance technique. The focus will be on beginning modern dance alignment, center work and modern dance movements across the floor. Current events that shape the history of modern dance in America and in Europe will also be covered. CSU, UC

KNDAN-150 Topics in Dance Arts
.3-4 units SC
• Variable hours
A supplemental course in the dance arts to provide a study of current concepts and problems in dance field and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

KNDAN-160A Tap Dance I
.5-2 units SC
• Variable hours
This is a beginning course in tap dance technique. The focus is on a wide range of tap dance styles. The cultural and historical aspects of this genre will also be studied. CSU, UC

KNDAN-160B Tap Dance II
.5-2 units SC
• Variable hours
• Recommended: KNDAN-160A or equivalent
This is an intermediate course in tap dance technique. The focus is on the introduction of intermediate tap dance steps and combinations. The contribution of tap dance to American art and culture will also be studied. CSU, UC

KNDAN-162 Broadway Dance
.5-2 units SC
• Variable hours
This is a course in Broadway musical dance technique. Dance styles from a variety of Broadway genres, as well as audition techniques, will be covered. The history of dance in musical theater and its impact on American culture will also be discussed. CSU, UC

KNDAN-164A Ballroom/Social Dance I
.5-2 units SC
• Variable hours
This is an activity course in basic ballroom/social dance. This course will focus on the techniques, history, terminology, principles and other elements, including style and rhythm of ballroom/social dance. A partner is not necessary as this course will incorporate an understanding of dance footwork specific to leaders and followers. A variety of dance styles will be covered, and may include American style fox-trot, American style waltz, American style tango, night club two-step, hustle, polka, quickstep and Viennese waltz. CSU, UC

KNDAN-166 Swing Dance
.5-2 units SC
• Variable hours
This is an introductory course in Swing dances. The techniques, terminology, steps, patterns, rhythms, music and history of the various Swing dances will be covered. This is a social dance class, but a partner is not required. CSU, UC

KNDAN-168A Salsa and Latin Dance I
.5-2 units SC
• Variable hours
This is an introductory course in the Latin dances, including Salsa. The techniques, terminology, steps, patterns, rhythms, music, history and development of a variety of Latin dances will be explored. This is a social dance class but a partner is not required. CSU, UC

KNDAN-168B Salsa and Latin Dance II
.5-2 units SC
• Variable hours
• Recommended: KNDAN-168A or equivalent
This is an intermediate level course in the Latin dances including Salsa. Complex techniques, patterns, terminology and rhythms will be explored as well as music history and the development of a variety of Latin dances. CSU, UC

KNDAN-169A Argentine Tango I
.5-2 units SC
• Variable hours
This dance activity course focuses on the fundamentals of Argentine Tango and relates the varied and complex rhythms of the music to the movements that are unique to this dance. CSU, UC
Kinesiology dance

**KNDAN-170A  Hip-Hop and Urban Funk Dance I**
.5-2 units  SC
• Variable hours
This dance activity course focuses on beginning hip-hop and funk dance technique. The impact of hip-hop and funk on popular dance, ethnic influences, historical events, and how these dance styles have come to reflect the diversity of America will be discussed. CSU, UC

**KNDAN-170B  Hip-Hop and Urban Funk Dance II**
.5-2 units  SC
• Variable hours
This dance activity course focuses on intermediate hip-hop and funk dance technique. This course is designed to increase student movement, vocabulary, and technical skills to include complex foot work, polyrhythmic movements, and the ability to improvise in a cipher. Similarities and differences of popular/social dance in the United States will also be presented. CSU, UC

**KINESIOLOGY INTERCOLLEGIATE ATHLETICS – KNICA**

Christine Worsley, Dean
Kinesiology, Athletics and Dance Division
Kinesiology Office Building, Room 104

**KNICA-098  Intercollegiate Pre-Participation Orientation**
.3 unit  P/NP
• Non degree applicable
• 6 hours lecture per term
This is a course preparing new students intending to try-out/compete for an intercollegiate athletic team, for the upcoming academic term and season of competition. Students will complete the California Community College Athletic Association’s (CCCAA) athletic eligibility requirements, complete medical forms and waivers, register for the NCAA Clearinghouse, and fulfill other requirements for community college athletic competition.

**KNICA-100  Student-Athlete Success I**
2 units  SC
• 27 hours lecture/36 hours laboratory per term
This course is designed to prepare the first year student-athlete for intercollegiate competition and academic achievement. Topics for this class will include, but are not limited to, eligibility, college academic resources, personal responsibility issues, and opportunities after DVC. CSU

**KNICA-101  Student-Athlete Success II**
2 units  SC
• 27 hours lecture/36 hours laboratory per term
This course is designed to further assist student-athletes toward degree completion, transfer, and/or professional employment while competing in intercollegiate athletics. Topics for this class will include, but are not limited to, transfer and athletic eligibility requirements for four year schools, the recruiting process, completing the application and/or professional employment process, scholarships and financial aid, leadership training, and personal responsibility for life success. CSU

**KNICA-120  Analysis of the Multiple Aspects of Modern Day Football**
.5-2 units  SC
• Variable hours
• Recommended: Competitive high school football experience or equivalent
This course provides the student the opportunity to review and analyze offensive and defensive schemes of daily practice video and opponent game film. Implement and install weekly game plans on offense, defense, and special teams (kicking game). CSU, UC (credit limits may apply to UC - see counselor)

**KNICA-199  Sport-Specific Athletic Conditioning**
.5-2 units  SC
• May be repeated three times
• Variable hours
This is an activity course designed for students to increase their off-season physical conditioning, skill/technique level, and knowledge of a specific intercollegiate sport. See current schedule of classes for sport offerings. CSU, UC (credit limits may apply to UC - see counselor)

**KNICA-200  Intercollegiate Baseball, Men**
3 units  SC
• May be repeated once
• 175 hours activity per term
• Recommended: Competitive high school baseball experience or equivalent
Instruction and intercollegiate competition is offered in this sport to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor)

**KNICA-202A  Intercollegiate Basketball-A, Men**
2 units  SC
• May be repeated once
• 115 hours activity per term
• Recommended: Competitive high school basketball experience or equivalent
• Note: Fall term only
Instruction and intercollegiate competition is offered in this sport to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor)
<table>
<thead>
<tr>
<th>Course Code</th>
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</table>
| KNICA-202B  | Intercollegiate Basketball-B, Men              | 1     | SC | • May be repeated once  
                      • 60 hours activity per term  
                      • Prerequisite: KNICA-202A or tryout audition  
                      • Note: Spring term only |
|             | Instruction and intercollegiate competition is offered in this sport to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor) |
| KNICA-203A  | Intercollegiate Basketball-A, Women            | 2     | SC | • May be repeated once  
                      • 115 hours activity per term  
                      • Recommended: Competitive high school basketball experience or equivalent  
                      • Note: Fall term only |
|             | Instruction and intercollegiate competition is offered in this sport to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor) |
| KNICA-203B  | Intercollegiate Basketball-B, Women            | 1     | SC | • May be repeated once  
                      • 60 hours activity per term  
                      • Prerequisite: KNICA-203A or tryout audition  
                      • Note: Spring term only |
|             | Instruction and intercollegiate competition is offered in this sport to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor) |
| KNICA-204   | Intercollegiate Cross Country, Men             | 3     | SC | • May be repeated once  
                      • 175 hours activity per term  
                      • Recommended: Competitive high school cross country experience or equivalent |
|             | Instruction and intercollegiate competition is offered in this sport to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor) |
| KNICA-205   | Intercollegiate Cross Country, Women           | 3     | SC | • May be repeated once  
                      • 175 hours activity per term  
                      • Recommended: Competitive high school cross country experience or equivalent |
|             | Instruction and intercollegiate competition is offered in this sport to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor) |
| KNICA-206   | Intercollegiate Football, Men                  | 3     | SC | • May be repeated once  
                      • 175 hours activity per term  
                      • Recommended: Competitive high school football experience or equivalent |
|             | Instruction and intercollegiate competition is offered in this sport to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor) |
| KNICA-210   | Intercollegiate Soccer, Women                  | 3     | SC | • May be repeated once  
                      • 175 hours activity per term  
                      • Recommended: Competitive high school soccer experience or equivalent |
|             | Instruction and intercollegiate competition is offered in this sport to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor) |
| KNICA-215   | Intercollegiate Softball, Women                | 3     | SC | • May be repeated once  
                      • 175 hours activity per term  
                      • Recommended: Competitive high school softball experience or equivalent |
|             | Instruction and intercollegiate competition is offered in this sport to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor) |
| KNICA-216   | Intercollegiate Swimming and Diving, Men       | 3     | SC | • May be repeated once  
                      • 175 hours activity per term  
                      • Recommended: Competitive high school swimming/diving experience or equivalent |
|             | Instruction and intercollegiate competition is offered in swimming and diving to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor) |
| KNICA-217   | Intercollegiate Swimming and Diving, Women     | 3     | SC | • May be repeated once  
                      • 175 hours activity per term  
                      • Recommended: Competitive high school swimming/diving experience or equivalent |
|             | Instruction and intercollegiate competition is offered in swimming to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor) |
KNICA-218  Intercollegiate Tennis, Men
3 units  SC
• May be repeated once
• 175 hours activity per term
• Recommended: Competitive high school tennis experience or equivalent

Instruction and intercollegiate competition is offered in this sport to those students who are selected, based on tryouts, prior to the start of the sport season. CSU, UC (credit limits may apply to UC - see counselor)
LIBRARY TECHNOLOGY – LT

Richard Robison, Dean
Library and Learning Resources Division
Library Building, Room 219

Possible career opportunities
Library courses teach the skills necessary to effectively locate, organize and use information in any academic or work setting. There are various titles for the jobs you will be qualified for with a certificate of achievement or associate of science degree in library technology: library technician, library assistant, library paraprofessional, instructional media assistant, information specialist, library media specialist, and website editor.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Library technology

Students completing the program will be able to...
A. explain library fundamental principles including intellectual freedom, open access, diversity and patron privacy and confidentiality.
B. apply knowledge and skills gained through the coursework to perform library technician-level tasks.
C. describe the characteristics of libraries and the roles of libraries in a diverse, multicultural, and democratic society, and how these needs can be met.
D. apply the basic principles and standardized systems of ordering, cataloging, classifying, processing, and maintaining library materials and resources.
E. demonstrate the workplace communication skills necessary to successfully interact with users and staff in the library and other information services.
F. identify and use the technologies found in the library and other information services.
G. analyze information critically to draw conclusions and/or solve problems when working with patrons, materials, and technology.

The associate in science degree in library technology prepares students for employment in the dynamic field of library and information services. The skills learned in this program may be used in public, school, academic, and corporate libraries, as well as in other jobs or businesses requiring information management skills. If you like working with people, books and information, consider a career in library technology.

DVC library technology students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intended to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 is appropriate for students who do not intend to transfer.

To earn the degree, students must complete each course used to meet a major requirement with a "C" grade or higher, maintain an overall GPA of 2.5 or higher in the coursework required for the major, and complete all general education requirements. Certain courses may satisfy both a major and general education requirement; however, the units are only counted once. With department chairperson’s approval, other course substitutions are possible for use in completing the program.

major requirements: units
LT-101 Foundations of Library and Information Services ............................................... 3
LT-102 Access and Technical Services in Libraries .................................................... 3
LT-104 Cataloging for Paraprofessionals .................................................................. 3
LT-105 Reference and Research Services: Tools and Techniques ......................... 3
LS-121 Information Literacy and Research Skills .................................................. 1
plus at least 2 units from:
LT-295 Occupational Work Experience in Library Technology ............................................. 1-4
LT-296 Internship in Occupational Work Experience Education in LT ..................... 1-4
plus at least 2 units from:
ENGL-177 Children’s Literature .......................................................... 3
LS-150 Topics in Library Studies ........................................................................... 0.3-4
LT-100 Introduction to a Career in Library Technology .................................................. 1
LT-106 School Library and Media Services ................................................................. 2
LT-107 Digital Assets: Tools and Methodologies .................................................... 2
LT-109 Delivering Library Services: Issues, Theory, and Techniques ...................... 2
LT-110 Job Search Skills for Library Careers ............................................................ 1
LT-111 Storytelling .................................................................................................. 2
LT-112 Internet Skills for Library Personnel ............................................................... 1
LT-150 Topics in Library Technology ...................................................................... 0.3-4
plus at least 2 units from:
ARTDM-105 Introduction to Digital Imaging .............................................................. 3
ARTDM-171 Introduction to Web Design .................................................................... 3
BUSMG-121 Practices and Concepts of Supervision .................................................... 3
BUSMG-168 Customer Service ............................................................................... 0.5
BUSMG-173 Intercultural Communication in the Workplace .................................. 0.5
CIS-100 Microsoft Windows – Comprehensive ......................................................... 2
COMSC-101 Computer Literacy ................................................................................ 4
ENGL-177 Children’s Literature .......................................................... 3
LS-150 Topics in Library Studies ........................................................................... 0.3-4
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LT-295 Occupational Work Experience in Library Technology ............................................. 1-4
LT-296 Internship in Occupational Work Experience Education in LT ..................... 1-4

The maximum number of units applicable to the program units in LT-295 or LT-196 is four. There may be no duplication of course units between groups of restricted electives.

total minimum required units 19

Notes: maximum number of units applicable to the program units in LT-295 or LT-196 is four. There may be no duplication of course units between groups of restricted electives.
Certificate of achievement
Library technology

Students completing the program will be able to...
A. explain library fundamental principles including intellectual freedom, open access, diversity, and patron privacy and confidentiality.
B. apply knowledge and skills gained through the coursework to perform library technician-level tasks.
C. describe the characteristics of libraries and the roles of libraries in a diverse, multicultural, and democratic society, and how these needs can be met.
D. apply the basic principles and standardized systems of ordering, cataloging, classifying, processing, and maintaining library materials and resources.
E. demonstrate the workplace communication skills necessary to successfully interact with users and staff in the library and other information services.
F. identify and use the technologies found in the library and other information services.
G. analyze information critically to draw conclusions and/or solve problems when working with patrons, materials, and technology.

This certificate program prepares students for employment in the dynamic field of library and information services. The skills learned in this program may be used in public, school, academic, and corporate libraries, as well as in other jobs or businesses requiring information management skills. If you like working with people, books and information, consider a career in library technology.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a "C" grade or higher and maintain an overall GPA of 2.5. With department chairperson’s approval, other course substitutions are possible for use in completing the program.

required courses:  

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</tr>
<tr>
<td>LT-102</td>
<td>Access and Technical Services</td>
<td>3</td>
</tr>
<tr>
<td>LT-104</td>
<td>Cataloging for Paraprofessionals</td>
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<td>LS-121</td>
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<td>LT-296</td>
<td>Internship in Occupational Work</td>
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<td>LT-100</td>
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<td>School Library and Media Services</td>
<td>2</td>
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<td>Internship in Occupational Work</td>
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<tr>
<td>LT-296</td>
<td>Experience Education in LT</td>
<td>1-4</td>
</tr>
</tbody>
</table>

Notes: maximum number of units applicable to the program units in LT-295 or LT-196 is four. There may be no duplication of course units between groups of restricted electives.

LT-100 Introduction to a Career in Library Technology

1 unit  SC
- 18 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly L-100

This course introduces the dynamic field of library and information technology for paraprofessionals. Various types of libraries and information centers, and the competencies needed for a successful career in the field as well as job opportunities in libraries and information centers will be explored. CSU
Library technology

LT-101  Foundations of Library and Information Services  
3 units  LR  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course provides an introduction and overview of the missions, services, operations, and staffing of libraries and information centers. The tools and terminology of library services, the library technician's role in the delivery of services, and strategies for successful job placement are emphasized. The course also explores current library issues and trends, as well as the relationship of libraries to the communities and populations they serve. CSU

LT-102  Access and Technical Services in Libraries  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course teaches the full array of access and technical services in a variety of library settings and collection formats including online systems and other technology applications. The theory and practice of selecting, acquiring and circulating materials in print and electronic formats is presented. Skills and competencies necessary for providing quality access services, the history of access services, and ethical, legal and policy considerations will be covered. CSU

LT-104  Cataloging for Paraprofessionals  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
- Formerly L-104  
An introductory course for library paraprofessionals on the basic theories, principles, concepts and procedures of bibliographic control, including descriptive cataloging, classification, subject analysis, physical processing, and bibliographic maintenance. Emphasis will be placed on print monographs, current Anglo-American Cataloging Rules, MARC 21 format, Library of Congress and Dewey classification and LC Subject Heading. CSU

LT-105  Reference and Research Services: Tools and Techniques  
3 units  LR  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course is an introduction to the use of print and online information resources found in public, school, college and special libraries. Students learn effective techniques for assisting library patrons, and are provided opportunities for developing reference service skills. The class uses resources available through the Diablo Valley College library plus other commonly available resources. CSU

LT-106  School Library and Media Services  
2 units  SC  
- 36 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course presents the principles and procedures central to the operations of school libraries and media centers with an emphasis on the multi-dimensional role of the library technician. The creation of effective learning environments, technology applications, philosophies of service and programming, as well as collection development and other regular procedures will be explored. CSU

LT-107  Digital Assets: Tools and Methodologies  
2 units  SC  
- 36 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course provides an introduction to the basic processes of creating and managing digital assets including assessing materials, managing files for preservation, and using current digitizing software systems. Access issues, metadata schemes, quality control, scanning equipment and other technologies will also be examined. CSU

LT-109  Delivering Library Services: Issues, Theory, and Techniques  
2 units  SC  
- 36 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
- Formerly L-109  
This course emphasizes oral and written communication skills and strategies that are essential to successful performance as a library paraprofessional. Communication within the organization, techniques to market programs and services, as well as customer and community relations are addressed. CSU

LT-110  Job Search Skills for Library Careers  
1 unit  SC  
- 18 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
- Formerly L-110  
This course will prepare students for a successful job search in a library field. Utilizing traditional and electronic methods, students will explore the range of positions and work environments available; use sources of information for job market research; identify key workplace skills, learn best practices for writing applications, resumes, and cover letters; and practice interviewing techniques. CSU
Library technology

LT-111  Storytelling  2 units  SC
- 36 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly L-111

An introduction to storytelling designed to develop skills as storytellers in the library, classroom, home and other settings. The class will survey various types and formats of storytelling and provide practical experience in presenting and evaluating stories. CSU

LT-112  Internet Skills for Library Personnel  1 unit  SC
- 18 hours lecture per term
- Recommended: LT-103 or equivalent; eligibility for ENGL-122 or equivalent
- Formerly L-112

This course teaches the use of the Internet in providing library and information services. The class is designed for library personnel whose responsibilities include using the Internet and other information systems for work-related tasks such as reference, cataloging, acquisitions and other information management activities. Exploration of advanced searching techniques, user training and evaluation of online resources are included. CSU

LT-150  Topics in Library Technology  .3–4 units  SC
- Variable hours
- Recommended: Eligibility for ENGL-122 or equivalent
- Formerly L-150

A supplemental course in Library to provide a study of current concepts and problems in library technology. Specific topics will be announced in the schedule of classes. CSU

LT-295  Occupational Work Experience Education in LT  1–4 units  SC
- May be repeated three times
- Variable hours
- Note: In order to enroll in LT-295, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

LT-295 is supervised employment that extends classroom learning to the job site and relates to the student’s chosen field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

MACHINE TECHNOLOGY

See Engineering technology - ENGTC

MATH

Despina Prapavessi, Dean
Math and Computer Science Division
Math Building, Room 267

Possible career opportunities
Mathematicians work in a variety of fields, among them statistics, analysis, actuarial science, mathematical modeling, computer programming, cryptography, research, and education. More than two years of college study is usually required for these career options. A strong background in mathematics is also required for many careers in engineering, accounting and finance, business administration, risk management, and business forecasting, as well as for research in computer science, social science, and the physical sciences.

Program learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.
**Associate in science in mathematics for transfer**

Students completing the program will be able to...

A. solve problems in linear algebra and differential and integral calculus, both single and multivariable.

B. recognize, explain, and apply basic techniques of mathematical proof.

C. utilize knowledge and skills from mathematics to solve mathematical problems from sciences such as physics, chemistry, engineering, or computer science.

The mathematics major is a liberal arts and sciences major for students planning to study mathematics, applied mathematics, or mathematics for secondary school teachers, but also for those pursuing a course of study in physics, chemistry, engineering, computer science, and economics. Mathematics at Diablo Valley College offers a broad range of courses including calculus, differential equations, linear algebra, discrete mathematics and statistics.

The associate in science in mathematics for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

**Mathematics**

**MATH-050 In-Progress Prealgebra with Arithmetic Review Self-Paced**

4 units  P/NP
- Non degree applicable
- 216 hours laboratory per term
- Note: Students do not enroll directly in this course.  
Enrollment is limited to transfer by instructor.

This course is designed to allow students who are enrolled in MATH-075SP to receive non degree applicable credit for mastery of some but not all of the outcomes in MATH-075SP. In order to receive credit for MATH-050, students must enroll in MATH-075SP and make reasonable progress through the content.

**MATH-051 In-Progress Elementary Algebra Self-Paced**

5 units  P/NP
- Non degree applicable
- 270 hours laboratory per term
- Recommended: MATH-075 or equivalent
- Note: Students do not enroll directly in this course.  
Enrollment is limited to transfer by instructor.

This course is designed to allow students enrolled in MATH-090SP to receive credit for mastery of some but not all of the outcomes in MATH-090SP. In order to receive credit for MATH-051, students must enroll in MATH-090SP and make reasonable progress through the content.

**MATH-052 In-Progress Intermediate Algebra Self-Paced**

5 units  P/NP
- Non degree applicable
- 270 hours laboratory per term
- Recommended: MATH-090 or MATH-090SP or equivalent
- Note: Students do not enroll directly in this course.  
Enrollment is limited to transfer by instructor.

This course is designed to allow students enrolled in MATH-120SP to receive credit for mastery of some but not all of the outcomes in MATH-120SP. In order to receive credit for MATH-052, students must enroll in MATH-120SP and make reasonable progress through the content.
Mathematics

MATH-053  In-Progress College Algebra Self-Paced
4 units  P/NP
- Non degree applicable
- 216 hours laboratory per term
- Recommended: Placement through the assessment process or MATH-120 or MATH-120SP or equivalent
- Note: Students do not enroll directly in this course. Enrollment is limited to transfer by instructor.

This course is designed to allow students enrolled in MATH-135SP to receive credit for mastery of some but not all of the outcomes in MATH-135SP. In order to receive credit for MATH-053, students must enroll in MATH-135SP and make reasonable progress through the content.

MATH-075  Prealgebra with Arithmetic Review
4 units  SC
- Non degree applicable
- 72 hours lecture per term

This course covers arithmetic review, prealgebra, and their application in everyday life. Topics include the arithmetic operations, long multiplication and division, decimals, fractions, percents, signed numbers, natural number exponents, order of operations, introduction to the concept of variables, combining like terms, solving linear equations, application problems and the use of geometric formulas.

MATH-075SP  Prealgebra with Arithmetic Review Self Paced
4 units  SC
- Non degree applicable
- 216 hours laboratory per term
- Note: In this computer-assisted, flexibly-paced class, students will utilize an online learning system for their initial instruction, as well as receive assistance during weekly face-to-face meetings. Students will have some flexibility on how much time they take to learn topics and when they take assessments, though minimum requirements and deadlines will apply. The online laboratories require computer access and may be completed either on or off campus. The face-to-face meetings will be held in the DVC Math Lab (for lab schedule go to www.dvc.edu/PHCmathlab for Pleasant Hill or www.dvc.edu/SRCmathlab for SRC). Students are encouraged to complete MATH-075SP in one semester, or take up to 2 semesters. MATH-075SP is equivalent to MATH-075; students who have completed MATH-075 will not receive credit for MATH-075SP.

This course is a computer-assisted, flexibly-paced class equivalent to MATH-075. This course covers arithmetic review, prealgebra, and their application in everyday life. Topics include arithmetic operations, long multiplication and division, decimals, fractions, percents, signed numbers, natural number exponents, order of operations, introduction to the concept of variables, combining like terms, solving linear equations, application problems and the use of geometric formulas.

MATH-077  Summer Bridge to College Math
1 unit  LR
- Non degree applicable
- 40 hours laboratory per term
- Note: This course is part of the EOPS Summer Institute Learning Community and is designed for recent high school graduates. Math/English assessment tests are required. Contact the EOPS Summer Institute Coordinator for more information.

This course is designed to help students transition to math college from high school. Students work with an instructor and the web-based ALEKS program to assess and build math skills in preparation for a college math course.

MATH-080  Topics in Basic Skills Math
.3-.4 units  SO
- Non degree applicable
- Variable hours

This is a supplemental course in mathematics to provide a variety of topics for basic skills students. Specific topics will be announced in the schedule of classes.

MATH-085  Accelerated Algebra I
4 units  SC
- Non degree applicable
- 54 hours lecture/54 hours laboratory per term

This is the first course of a two-semester accelerated algebra sequence that includes the material in MATH-075 and the first half of MATH-090. Topics include algebraic reasoning, percentages, problem solving, solving linear equations, graphing lines, and systems of equations.

MATH-090  Elementary Algebra
5 units  SC
- Non degree applicable
- 90 hours lecture per term
- Prerequisite: Placement through the assessment process or MATH-075 or MATH-075SP or equivalent

This course is an introduction to the techniques and reasoning of algebra, including linear equations and inequalities, development and use of formulas, algebraic expressions, systems of equations, graphs and introduction to quadratic equations.

MATH-090E  Elementary Algebra with Study Skills
6 units  SC
- Non degree applicable
- 108 hours lecture per term
- Prerequisite: Placement through the assessment process or MATH-075 or MATH-075SP or equivalent

This course integrates study skills for math success with an introduction to the techniques and reasoning of algebra, including linear equations and inequalities, development and use of formulas, algebraic expressions, systems of equations, graphs and introduction to quadratic equations. Study skills topics will include time management, note taking, memory techniques, studying for tests, test anxiety and math anxiety.
MATH-090SP  Elementary Algebra - Self Paced  
5 units  SC  
- Non degree applicable  
- 270 hours laboratory per term  
- Prerequisite: Placement through the assessment process or MATH-075 or MATH-075SP or equivalent  
- Note: Formerly MATH-110SP. In this computer-assisted, flexibly-paced class, students will utilize an online learning system for their initial instruction, as well as receive assistance during weekly face-to-face meetings. Students will have some flexibility on how much time they take to learn topics and when they take assessments, though minimum requirements and deadlines will apply. The online labs require computer access and may be completed either on or off campus. The face-to-face meetings will be held in the DVC Math Lab (for lab schedule go to www.dvc.edu/PHcmathlab for Pleasant Hill or www.dvc.edu/SRCmathlab for SRC). Students are encouraged to complete MATH-090SP in one semester, or take up to 2 semesters. MATH-090SP is equivalent to MATH-090; students who have completed MATH-090 will not receive credit for MATH-090SP.  
This course is a computer-assisted, flexibly-paced class equivalent to MATH-090. The topics include linear equations and inequalities, development and use of formulas, algebraic expressions, systems of equations, operations on polynomials, factoring, graphs, and an introduction to quadratic equations.

MATH-092  Math for Trade Pre-Apprentices  
4 units  P/NP  
- Non degree applicable  
- 72 hours lecture per term  
- Note: This course is part of the Pre-Apprenticeship program.  
This course provides practice in the mathematics needed to pass apprenticeship exams for various trades, as well as the mathematics required by apprentices on the job site. This course offers mathematics instruction contextualized for the building trades.

MATH-094  Statway I  
4 units  SC  
- Non degree applicable  
- 54 hours lecture/54 hours laboratory per term  
- Prerequisite: Placement through the assessment process or MATH-075 or MATH-075SP or equivalent  
- Note: TI-83 or TI-84 graphing calculator required  
This is the first semester of a two-semester course that introduces the concepts of probability and statistics with requisite arithmetic and algebraic topics integrated throughout. It is intended for students in humanities or social sciences majors. Topics include data collection, organization and graphical interpretation of data, qualitative and quantitative data sets, measures of central tendency and measures of dispersion, bivariate data and scatter plots, linear functions and their graphs, nonlinear functions and their graphs, and linear and exponential/logarithmic models. Learning strategies for success with an emphasis on study skills, resource acquisition, and maintaining a positive perspective towards learning are also discussed and applied.

MATH-114  Geometry  
3 units  SC  
- 54 hours lecture per term  
- Prerequisite: Placement through the assessment process or MATH-090 or MATH-090E or MATH-090SP or equivalent  
- Recommended: Eligibility for ENGL-116/118 or equivalent  
Students will use geometric definitions, axioms, and constructions and both inductive and deductive reasoning techniques to investigate the properties of lines, polygons, and circles. Students will prove geometric theorems, and derive and apply formulas for perimeter, area, and volume for a variety of plane and solid geometric objects.

MATH-119  Accelerated Algebra II  
4 units  SC  
- 54 hours lecture/54 hours laboratory per term  
- Prerequisite: Placement through the assessment process or MATH-085 or 090 or 090SP or 090E or equivalent  
- Note: Students who have successfully completed MATH-120 or MATH-120SP should not enroll in MATH-119. Students who have successfully completed MATH-120 or MATH-120SP will not receive credit for MATH-119.  
This is the second course of a two-semester accelerated algebra sequence; it covers the topics in the second half of MATH-090 and in MATH-120. Special products and factors, fractional equations, inequalities, complex numbers, logarithms, and functions will be covered.

MATH-120  Intermediate Algebra  
5 units  SC  
- 90 hours lecture per term  
- Prerequisite: Placement through the assessment process or MATH-090 or MATH-090E or MATH-090SP or equivalent  
This course will expand upon the material covered in elementary algebra. Topics will include special products and factors, fractional equations, inequalities, complex numbers, the binomial theorem, logarithms, and functions. The course is equivalent to a second year high school algebra course.
Mathematics

MATH-120SP  Intermediate Algebra - Self Paced
5 units  SC
• 270 hours laboratory per term
• Prerequisite: Placement through the assessment process or MATH-090 or MATH-090E or MATH-090SP or equivalent
• Note: In this computer-assisted, flexibly-paced class, students will utilize an online learning system for their initial instruction, as well as receive assistance during weekly face-to-face meetings. Students will have some flexibility on how much time they take to learn topics and when they take assessments. Though minimum requirements and deadlines will apply. The online laboratories require computer access and may be completed either on or off campus. The face-to-face meetings will be held in the DVC Math Lab (for lab schedule go to www.dvc.edu/PHCMathlab for Pleasant Hill or www.dvc.edu/SRCmathlab for SRC). Students are encouraged to complete MATH-120SP in one semester, or take up to 2 semesters. MATH-120SP is equivalent to MATH-120; students who have completed MATH-120 will not receive credit for MATH-120SP. This course is a computer-assisted, flexibly-paced class equivalent to MATH-120. The topics include special products and factors, fractional equations, systems of linear equations, inequalities, conics, complex numbers, the binomial theorem, logarithms, and functions. The course is equivalent to a second year high school algebra course.

MATH-121  Plane Trigonometry
3 units  SC
• 54 hours lecture per term
• Prerequisite: Placement through the assessment process or MATH-120 or 120SP or equivalent
• Recommended: High school geometry or equivalent
This course focuses on the theory and applications of trigonometry, including right triangle trigonometry, general angle trigonometry, and trigonometry on the unit circle, as well as trigonometric functions of real numbers. Applications include solutions of right and oblique triangles in problems in surveying, physics, engineering and navigation. CSU

MATH-124  Mathematics for Liberal Arts
3 units  LR
• 54 hours lecture per term
• Prerequisite: Placement through the assessment process or MATH-119 or MATH-120 or 120SP or equivalent
This course presents applications of techniques and concepts of intermediate algebra and critical thinking to the solving of contemporary problems in mathematics. Topics may include exponential functions, logarithmic scales, probability, statistics, finance, matrix operations, logic or geometry. Historical context of some of the great ideas of mathematics will also be explored. CSU, UC

MATH-125  Mathematical Concepts for Elementary School Teachers
3 units  SC
• 54 hours lecture per term
• Prerequisite: Placement through the assessment process or MATH-119 or MATH-120 or 120SP or equivalent
This course focuses on the development of quantitative reasoning skills through in-depth, integrated explorations of topics in mathematics, including real number systems and subsystems. Emphasis is on comprehension and analysis of mathematical concepts and applications of logical reasoning. C-ID MATH 120, CSU, UC

MATH-135  College Algebra
4 units  LR
• 72 hours lecture per term
• Prerequisite: Placement through the assessment process or MATH-119 or MATH-120 or 120SP or equivalent
This course presents a study of functions and their graphs, including polynomial, rational, radical, exponential, absolute value, and logarithmic functions; systems of equations; theory of polynomial equations; analytic geometry. Other topics include inequalities, nonlinear systems, conic sections. CSU, UC (credit limits may apply to UC - see counselor)

MATH-135SP  College Algebra - Self-Paced
4 units  LR
• 216 hours laboratory per term
• Prerequisite: Placement through the assessment process or MATH-119 or MATH-120 or 120SP or equivalent
• Note: In this computer-assisted, flexibly-paced class, students will utilize an online learning system for their initial instruction, as well as receive assistance during weekly face-to-face meetings. Students will have some flexibility on how much time they take to learn topics and when they take assessments. Though minimum requirements and deadlines will apply. The online laboratories require computer access and may be completed either on or off campus. The face-to-face meetings will be held in the DVC Math Lab (for lab schedule go to www.dvc.edu/PHCMathlab for Pleasant Hill or www.dvc.edu/SRCmathlab for SRC). Students are encouraged to complete MATH-135SP in one semester, or take up to 2 semesters. MATH-135SP is equivalent to MATH-135; students who have completed MATH-135 will not receive credit for MATH-135SP. This course is a computer-assisted, flexibly-paced class equivalent to MATH-135. This course presents a study of functions and their graphs, including polynomial, rational, radical, exponential, absolute value, and logarithmic functions; systems of equations; theory of polynomial equations; analytic geometry. Other topics include inequalities, nonlinear systems, conic sections. CSU, UC (credit limits may apply to UC - see counselor)
### Mathematics

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Mode</th>
<th>Prerequisite/Comment</th>
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<tbody>
<tr>
<td>MATH-140</td>
<td>Tutor Training</td>
<td>1</td>
<td>LR</td>
<td>10 hours lecture/12 hours laboratory/12 hours laboratory by arrangement per term</td>
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<td>Prerequisite: Placement through the assessment process or MATH-142 or MATH-144 or MATH-182 or MATH-191 or equivalent</td>
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<td>Note: TI-83 or TI-84 graphing calculator required</td>
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<td>Basic principles and methods of tutoring, including the tutoring sequence, leading and probing questions, communication skills, and learning theory. Application of tutoring techniques to specific areas of mathematics including algebra, trigonometry, and pre-calculus. Students will receive instruction in helping tutees with special needs. CSU</td>
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<tbody>
<tr>
<td>MATH-142</td>
<td>Elementary Statistics with Probability</td>
<td>4</td>
<td>LR</td>
<td>72 hours lecture per term</td>
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<td>Prerequisite: Placement through the assessment process or MATH-119 or MATH-120 or 120SP or equivalent</td>
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<td>TI-83 or TI-84 graphing calculator required</td>
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<td>This course is designed to introduce the student to the study of statistics and probability. Topics include descriptive statistics (organization of data, histograms and measures of central tendency and spread), linear correlation and regression, design of experiments, introductory probability, random variables, the normal distribution and student's t-distribution, and statistical inference, including confidence intervals and tests of significance. Use of a graphing calculator or computer for statistical analysis is required. C-ID MATH 110, CSU, UC (credit limits may apply to UC - see counselor)</td>
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<tr>
<td>MATH-144</td>
<td>Statway II</td>
<td>4</td>
<td>LR</td>
<td>54 hours lecture/54 hours laboratory per term</td>
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<td>Prerequisite: MATH-094 or equivalent</td>
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<td>TI-83 or TI-84 graphing calculator required</td>
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<td>This is the second semester of a two-semester course that introduces the concepts of probability and statistics with requisite arithmetic and algebraic topics integrated throughout. It is intended for students in humanities or social science majors. Topics include sampling distributions, the Central Limit theorem, confidence intervals and hypothesis testing for means and proportions, chi-square tests and mathematical modeling. Learning strategies for success with an emphasis on study skills, resource acquisition, and maintaining a positive perspective towards learning are also discussed and applied. CSU, UC (credit limits may apply to UC - see counselor)</td>
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<tbody>
<tr>
<td>MATH-150</td>
<td>Topics in Mathematics</td>
<td>.3-4</td>
<td>SC</td>
<td>Variable hours</td>
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<td></td>
<td>A supplemental course in mathematics to provide a study of current concepts and problems. Specific topics will be announced in the schedule of classes. CSU</td>
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<tbody>
<tr>
<td>MATH-181</td>
<td>Finite Mathematics</td>
<td>3</td>
<td>LR</td>
<td>54 hours lecture per term</td>
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<td>Prerequisite: Placement through the assessment process or MATH-119 or MATH-120 or 120SP or equivalent</td>
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<td>This course applies intermediate algebra and critical thinking to the solution of contemporary problems in business and the life sciences. Topics include linear models, systems of linear equations and inequalities, linear programming (with geometric method and the simplex method), matrix equations, sets and probabilities, and finance. Students will use a graphing calculator or computer software to manipulate matrices. C-ID MATH 130, CSU, UC</td>
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<tbody>
<tr>
<td>MATH-182</td>
<td>Calculus for Management, Life Science and Social Science I</td>
<td>4</td>
<td>LR</td>
<td>72 hours lecture per term</td>
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<td>Prerequisite: Placement through the assessment process or MATH-125 or MATH-135SP or MATH-191 or equivalent</td>
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<td>TI-83 or TI-84 graphing calculator required</td>
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<td>Recommended: Eligibility for ENGL-122 or equivalent</td>
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<td>The first in a two-semester calculus sequence for management, life science, and social science majors. Topics include the derivative and its applications (including curve sketching, optimization, and rates of change), an introduction to the integral (including Riemann sums and the Fundamental Theorem of Calculus) and its applications. C-ID MATH 140, CSU, UC (credit limits may apply to UC - see counselor)</td>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Mode</th>
<th>Prerequisite/Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH-183</td>
<td>Calculus for Management, Life Science and Social Science II</td>
<td>4</td>
<td>LR</td>
<td>72 hours lecture per term</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prerequisite: MATH-121 or equivalent</td>
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<td></td>
<td>Eligibility for ENGL-122 or equivalent</td>
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<tr>
<td></td>
<td>Recommended: MATH-121 or equivalent; eligibility for ENGL-122 or equivalent</td>
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<td>This is the second course in a two-semester sequence in calculus for management, life science, and social science majors, and is a continuation of MATH-182. Topics include techniques of integration, applications of the integral, multivariable functions, differential equations, and Taylor polynomials. CSU, UC (credit limits may apply to UC - see counselor)</td>
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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Mode</th>
<th>Prerequisite/Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH-191</td>
<td>Pre-Calculus</td>
<td>5</td>
<td>LR</td>
<td>90 hours lecture per term</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>Prerequisite: Placement through the assessment process or MATH-120 or 120SP or equivalent</td>
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<td></td>
<td></td>
<td>TI-83 or TI-84 graphing calculator required</td>
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<td>Note: This course has a technology requirement. See individual instructor for further information.</td>
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<td>This course is an in-depth treatment of functions and their graphs, including polynomial, rational, logarithmic, exponential and trigonometric functions. Conic sections, nonlinear systems, vectors and complex numbers are also covered. Use of a graphing calculator or a computer algebra system is required. CSU, UC (credit limits may apply to UC - see counselor)</td>
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</tbody>
</table>
Mathematics

MATH-192  Analytic Geometry and Calculus I
5 units  LR  
- 90 hours lecture per term
- Prerequisite: Placement through the assessment process or MATH-191 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
This course presents the elements of analytic geometry, differentiation and integration of algebraic and transcendental functions with applications. Use of a graphing calculator or a computer algebra system is required. C-ID MATH 210, CSU, UC (credit limits may apply to UC - see counselor)

MATH-193  Analytic Geometry and Calculus II
5 units  LR  
- 90 hours lecture per term
- Prerequisite: MATH-192 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
This course is a continuation of MATH-192. Techniques and applications of integration in geometry, science and engineering will be explored. Work with algebraic and transcendental functions will be continued. Other topics will include numerical methods in evaluation of the integral, infinite series, solving differential equations, applications of differential equations, polar coordinates, parametric equations, and conic sections. C-ID MATH 220, CSU, UC

MATH-194  Linear Algebra
3 units  LR  
- 54 hours lecture per term
- Prerequisite: MATH-193 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
This course is an introduction to linear algebra, covering vector spaces, matrices, determinants, bases, and linear transformations. Techniques for solving systems of equations using matrices, and applications of linear transformations will be covered. C-ID MATH 250, CSU, UC

MATH-195  Discrete Mathematics
4 units  LR  
- 72 hours lecture per term
- Prerequisite: MATH-193 or equivalent
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: MATH-193 or equivalent may be taken either as a prerequisite or concurrently
This course provides an introduction to propositional logic, induction, set theory, relations, and functions, counting and combinatorics, introduction to trees, graph theory, algorithms, and algebraic structures. The emphasis is on topics of interest to computer science students. CSU, UC

MATH-292  Analytic Geometry and Calculus III
5 units  LR  
- 90 hours lecture per term
- Prerequisite: MATH-193 or equivalent
This class covers the further study of limits, parametric equations, vector-valued functions, analytic geometry of three dimensions, partial derivatives, multiple integrals, and Green’s, Stokes’ and the Divergence theorems. C-ID MATH 230, CSU, UC

MATH-294  Differential Equations
5 units  LR  
- 90 hours lecture per term
- Prerequisite: MATH-292 or equivalent
- Recommended: MATH-194 or equivalent (may be taken concurrently)
This course presents an introduction to the theory and applications of ordinary differential equations and an introduction to partial differential equations. C-ID MATH 240, CSU, UC

MATH-298  Independent Study
.5-3 units  SC  
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

MATH-299  Student Instructional Assistant
.5-3 units  SC  
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU
**Music**

Toni Fannin, Interim Dean  
Applied and Fine Arts Division  
Business and Foreign Language Building, Room 204

### Possible career opportunities

Music prepares students for careers as performers, teachers, composers, historians, arts administrators, and more. Career options include: conductor, arranger, film scorer/composer, music business/manager, music editor, music supervisor/director, songwriter, transcriber, editor (print music publishing), choir director, midi engineering, recording engineer, studio director or manager, sound designer, music therapist, instrumental soloist, sound technician, and tour coordinator. Many careers require more than two years of study.

### Program learning outcomes

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at [www.dvc.edu/slo](http://www.dvc.edu/slo).

### Associate in arts degree

**Music**

Students completing the program will be able to...

- **A.** perform music with technical facility and artistry on his/her voice or choice of instrument as a soloist and as a member of an ensemble.
- **B.** demonstrate practical musical literacy, both theoretical and historical.
- **C.** listen to music with practical awareness, theoretical, critical, and historical.

The associate in arts degree in music offers students the opportunity to attain the basic skills and knowledge needed as preparation for careers in music and further undergraduate study. The music major is a two-year program of transferable courses open to all students. Required courses include applied music, theory and musicianship, piano proficiency and large ensemble. The choice of large ensemble performance courses and literature courses enables the student to customize his/her own needs and/or special interests.

This degree provides students with the foundations for a broad range of musical specializations such as instrumental performance, vocal performance, jazz performance, composition, theory, musicology, ethnomusicology, music education, and music industry. Music faculty and staff are dedicated to assisting students in exploring performance and teaching opportunities, and transfer to four-year institutions of higher learning.

The DVC music major is intended for transfer. Students who intend to transfer to a four-year baccalaureate program should consult with a counselor regarding specific major preparation requirements at the transfer institution of their choice. Students may not take a pass/no pass option for major courses. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is not generally advised.

Students must complete each of the courses required for the major with a "C" grade or higher. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

<table>
<thead>
<tr>
<th>major requirements:</th>
<th>units</th>
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<tbody>
<tr>
<td><strong>applied music</strong></td>
<td></td>
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<tr>
<td>a minimum of 2 times for a total of 2 units</td>
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</tr>
<tr>
<td>MUSIC-100 Applied Music</td>
<td>1</td>
</tr>
<tr>
<td><strong>theory and musicianship</strong></td>
<td></td>
</tr>
<tr>
<td>MUSIC-122 Theory and Musicianship I</td>
<td>4</td>
</tr>
<tr>
<td>MUSIC-123 Theory and Musicianship II</td>
<td>4</td>
</tr>
<tr>
<td>MUSIC-222 Theory and Musicianship III</td>
<td>4</td>
</tr>
<tr>
<td>MUSIC-223 Theory and Musicianship IV</td>
<td>4</td>
</tr>
<tr>
<td><strong>piano proficiency</strong></td>
<td></td>
</tr>
<tr>
<td>MUSIC-150 Beginning Piano I</td>
<td>1*</td>
</tr>
<tr>
<td>MUSIC-151 Beginning Piano II</td>
<td>1*</td>
</tr>
<tr>
<td><strong>large ensemble</strong></td>
<td></td>
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<tr>
<td>plus a minimum of 4 units from:</td>
<td></td>
</tr>
<tr>
<td>MUSIC-135 Vocal Jazz Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC-136 Jazz Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC-140 Wind Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC-162 Concert Choir</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC-166 Chamber Singers</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC-180 Diablo Valley Masterworks Chorale</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC-236 Night Jazz Band</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC-240 Symphonic Band</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC-290 DVC Philharmonic Orchestra</td>
<td>1</td>
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</table>

**total minimum required units** 22

*Credit by examination available recommended courses:*

<table>
<thead>
<tr>
<th>music literature</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC-110 Music Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC-112 America's Music - A Multicultural Perspective</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC-114 World Music</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC-117 History of Rock and R&amp;B</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC-118 History of Jazz</td>
<td>3</td>
</tr>
</tbody>
</table>
Associate in arts in music for transfer

Students completing the program will be able to...

A. perform music with technical facility and artistry on his/her voice or choice of instrument as a soloist and as a member of an ensemble.

B. demonstrate practical musical literacy, both theoretical and historical.

C. listen to music with practical awareness: theoretical, critical, and historical.

The associate in arts in music for transfer major at Diablo Valley College (DVC) offers students the opportunity to attain the basic skills and knowledge needed as preparation for careers in music and further undergraduate study. Required courses include applied music, theory and musicianship, and large ensemble. The choice of large ensemble performance and choice of voice or specific instrument in applied music enables the student to customize his/her own needs and/or special interests. This degree provides students with the foundations for a broad range of musical specializations such as instrumental performance, vocal performance, jazz performance, composition, theory, musicology, ethnomusicology, music education, and music industry. Music faculty and staff are dedicated to assisting students in exploring, performance and teaching opportunities, and transfer to baccalaureate programs in music.

The associate in arts in music for transfer is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE), or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major:
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor's degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSU GE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate's degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

major requirements: units
MUSIC-100 Applied Music.................................1*
MUSIC-122 Theory and Musicianship I...............4
MUSIC-123 Theory and Musicianship II................4
MUSIC-222 Theory and Musicianship III.............4
MUSIC-223 Theory and Musicianship IV................4

plus at least 4 units from:
MUSIC-135 Vocal Jazz Ensemble..........................1
MUSIC-136 Jazz Ensemble..................................1
MUSIC-140 Wind Ensemble..................................1
MUSIC-162 Concert Choir..................................1
MUSIC-166 Chamber Singers...............................1
MUSIC-240 Symphonic Band.................................1
MUSIC-290 DVC Philharmonic Orchestra................1

total units for the major 24

*MUST be taken 4 times (total 4 units)

Limitations on enrollment

Effective fall term 2013, changes to the regulations that govern community college enrollments placed limitations on the number of courses that students may take in certain disciplines within the Contra Costa Community College District. The charts below indicate which Diablo Valley College (DVC) courses are assigned to groups of courses ("families") for which limitations have been imposed. Certain courses within certain “families” may be repeated (see catalog description), however, students are limited to four enrollments within the family. Certain DVC courses are equivalent to courses at Los Medanos College and Contra Costa College. An enrollment in an equivalent course at one of those colleges will count toward the allowable four enrollments within the family.

NOTE: Diablo Valley College may offer experimental or topics courses. When appropriate, based on content, such courses will be assigned to a “family” and that enrollment will be counted as an experience within the “family”.

MUSIC

Family: Applied music
MUSIC-100 Applied Music

Family: Repertoire/literature
MUSIC-255 Piano Repertoire Master Class

Family: Class piano
MUSIC-150 Beginning Piano I
MUSIC-151 Beginning Piano II
MUSIC-250 Intermediate Piano I
MUSIC-251 Intermediate Piano II

Family: Class classical guitar
MUSIC-101 Beginning Guitar
MUSIC-102 Intermediate Guitar
Family: Solo improvisation
MUSIC-127 Jazz Theory and Improvisation
MUSIC-128 Jazz Theory and Improvisation II
MUSIC-152 Jazz Piano
MUSIC-171 Jazz and Popular Solo Voice
MUSIC-190JA Jazz Theory and Improvisation II

Family: Pedagogy
MUSIC-256 Pedagogy for Studio Music Teachers

Family: Class vocal study
MUSIC-133 Opera Theater
MUSIC-170 Applied Voice Training
MUSIC-179 Intermediate Applied Voice

Family: Classical large ensembles - Orchestra
MUSIC-180 Diablo Valley Masterworks Chorale
MUSIC-290 DVC Philharmonic Orchestra

Family: Classical large ensembles - Choir
MUSIC-162 Concert Choir

Family: Classical large ensembles - Band
MUSIC-240 Symphonic Band

Family: Classical chamber ensembles
MUSIC-103 Guitar Ensemble
MUSIC-104 Advanced Guitar Ensemble
MUSIC-140 Wind Ensemble
MUSIC-142 Woodwind Ensemble
MUSIC-144 Brass Ensemble
MUSIC-166 Chamber Singers
MUSIC-168 Percussion Ensemble
MUSIC-176 String Ensemble
MUSIC-252 Piano Ensemble

Family: Classical large ensembles - Jazz, pop, rock
MUSIC-136 Jazz Ensemble
MUSIC-236 Night Jazz Band

Family: Ensembles - Jazz, pop, rock
MUSIC-108 Rock Theory and Improvisation I
MUSIC-130 Jazz Workshop
MUSIC-135 Vocal Jazz Ensemble
MUSIC-137 Jazz Combos
MUSIC-190RT Rock Theory and Improvisation II
MUSIC-190SM Soul Music of the 1962-1980 Era
MUSIC-208 Rock Theory and Improvisation II

Family: Musical theater
MUSIC-134 Musical Theater Workshop
MUSIC-190SH Show Choir

Family: Performance
MUSIC-109 Live Music Production and Stagecraft I
MUSIC-190LP Live Production Techniques
MUSIC-209 Live Music Production and Stagecraft II

MUSIC-100 Applied Music
1 unit LR
- May be repeated three times
- 72 hours laboratory by arrangement per term
- Limitation on enrollment: Audition required. Specific days and times are announced in the Schedule of Classes. Students must have the ability to read written music at sight, play one instrument or sing with an accomplished level of technical facility, an accomplished level of metric and rhythmic accuracy as a soloist, and an accomplished level of intonation and/or harmonic awareness.
- Note: This course is limited to students majoring in music and intending to complete the A.A. or A.A.T. in Music, and must therefore be concurrently enrolled in a major performance ensemble (choir, band, orchestra, jazz ensemble) and in a theory and musicianship class (MUSIC-122, 123, 222, 223).

This course consists of individualized study of the appropriate techniques and repertoire for the specific instrument or voice being studied. The emphasis is on the progressive development of skills needed for solo performance. Achievement is evaluated through a juried performance. Students receive six hours of lessons from an instructor scheduled throughout the semester. Students are required to practice at least 3 hours per week during scheduled supervised practice hours in the department practice rooms. Students will meet an additional 12 hours during the semester for group discussion and performances. C-ID MUS 160, CSU, UC

MUSIC-101 Beginning Guitar
1 unit SC
- 54 hours laboratory per term
- Note: Students must provide an acoustic six-string guitar for use in the course

This course provides beginning six-string guitar instruction for general students as well as music students seeking to learn a second instrument. The course includes instruction in both folk and classical styles. First position keys and chords, harmonization by ear, transposition, various strums and styles, finger-picking accompaniments, bass notes, basic music theory, and note reading are taught. No previous musical experience is necessary. CSU, UC

MUSIC-102 Intermediate Guitar
1 unit SC
- 60 hours laboratory per term
- Recommended: MUSIC-101 or equivalent
- Note: Students must provide an acoustic six-string guitar for use in the course

This course provides intermediate six-string guitar instruction. Intermediate level classical solo repertoire as well as equivalent level popular music will be examined. Bar chords, intermediate level keys and arpeggios, transposition with and without a capo, strums, bass runs, and classical theory will be taught. CSU, UC
Music

MUSIC-103 Guitar Ensemble
1 unit SC
• May be repeated three times
• 60 hours laboratory per term
• Recommended: MUSIC-102 or equivalent
• Note: Students must provide an acoustic six-string guitar for use in the course

This course focuses on the sight-reading, rehearsal, and performance of basic-level guitar ensemble literature. Basic note reading skills will be employed. Each member of the group will become a better musician through individual practice, listening, performance, and being an active part of the ensemble experience. CSU, UC

MUSIC-104 Advanced Guitar Ensemble
1 unit SC
• May be repeated three times
• 60 hours laboratory per term
• Recommended: MUSIC-103 or equivalent
• Note: Students must provide an acoustic six-string guitar for use in the course

This course focuses on the sight-reading, rehearsal, and performance of advanced guitar ensemble literature. Students will experience an expanded ensemble repertoire arranged for up to eight players featuring the music of Bach, Haydn, and other classical masters. Advanced note reading skills will be employed. Each member of the group will become a better musician through individual practice, listening, performance, and being an active part of the ensemble experience. CSU, UC

MUSIC-108 Rock Theory and Improvisation I
1 unit SC
• 60 hours laboratory per term

This course presents the basic study and performance of historical Blues, including Funk, Soul, R&B, Country, and Rock. Both theoretical and performance aspects will be covered. Small bands (guitar, bass, drums, keyboards, horns, and vocals) will be formed for class performances. Guest artists and industry experts will be featured each term. CSU, UC

MUSIC-109 Live Music Production and Stagecraft I
1 unit SC
• 60 hours laboratory per term

This course provides the beginning musician with basic live-show production experience. Practical applications of stage processes from load-in to load-out, including basic stagecraft, live sound, and light engineering will be presented. Guest artists and industry experts will be featured each term. CSU, UC

MUSIC-110 Music Appreciation
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course is an introduction to the experience of listening to music with an appreciation of its technical, stylistic, expressive, social, and historical aspects. Audio recordings, audio-video recordings, and live performances are used to study the evolution of Western classical styles and genres including opera, symphony, concerto, and chamber music, as well as jazz and rock. Some comparison of Western musical traditions with those of other cultures will be included. C-ID MUS 100, CSU, UC

MUSIC-112 America’s Music - A Multicultural Perspective
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course is based upon the idea that music is culture. Students will explore, evaluate, compare, and contrast the diverse music and traditions of America. This includes the cultural contributions and influences of major ethnic groups. The course will serve as an introduction to the field of ethnomusicology. Students will examine the historical, religious, political, and social contexts for music development and experience. Students will study the relation of music to cultural continuity and/or change within both mainstream and marginalized populations. CSU, UC

MUSIC-114 World Music
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course provides a survey of world music. Students will explore, evaluate, compare, and contrast the diverse music traditions, focusing on the cultural contributions and influences in the Americas, Asia, the Middle East, Africa, Oceania, and Europe. Historical, cultural, philosophical, and social conditions in which music exists, its relationship to cultural continuity and/or change, as well as the artistic conditions in which musics and cultures develop will be explored through three primary lenses - sound, concept, and behavior. This course serves as an introduction to the field of ethnomusicology. CSU, UC

MUSIC-115 Music of the Middle East and South Asia
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

This course is a survey of music cultures in the Middle East/North Africa and South Asia. Students will study traditional and popular musical traditions in rural, urban, and diaspora communities. Local, national, and global contexts for music will be demonstrated by the examination of the ways in which hybrid musical forms emerge through contact with Western music. CSU, UC
MUSIC-116 Native American Music of the Americas
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course provides a survey of musical traditions, contributions and influences of Native peoples in North, Central, and South America. Musical traditions and genres affected by social, historical, and political conditions will be presented. Global issues and events will be explained through analyzing the ways in which new or hybrid musical forms emerge through contact with non-Native musics. An emphasis on music used as a tool of resistance and its role in maintaining identity will be analyzed within the processes of cultural continuity and change. The course uses concepts from ethnomusicology and anthropology to promote the idea that music and culture are inseparable. CSU, UC

MUSIC-117 History of Rock and R&B
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
The course will examine the history of rock and roll and its musical roots. Students will learn basic music listening skills while examining the multicultural history of rock and its connection to contemporary American culture. Audio recordings, audio-visual recordings, and live performances are used to study the evolution of rock and its various musical roots including blues, country, Rhythm and Blues (R&B), and folk music. CSU, UC

MUSIC-118 History of Jazz
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents the history of jazz music from African retentions, ragtime, stride, disjunctive, swing, bebop, and cool, to various contemporary jazz and fusion art forms. It includes a study of the cultural forces that have shaped the art from European, African, Latin, and African-American influences. The class explores the contributions and conflicts of African-Americans throughout the history and development of this American music. CSU, UC

MUSIC-119 The History and Culture of Hip Hop Music
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents the development of hip hop as a musical style and cultural movement. Students will examine key figures in hip hop, institutions, and social settings through readings, electronic media, videos, and hands-on projects. Students will also investigate how hip hop culture is not only a source of entertainment, but also a medium that analyzes and/or provides commentary regarding social, economic, political and cultural issues dealing with identity, cultural genocide, misogyny, racism, classism, materialism, freedom of speech and sexuality. CSU, UC

MUSIC-121 Introduction to Music Composition
3 units SC
• 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term
• Recommended: MUSIC-122 or equivalent
This course presents an introduction to basic techniques for music composition. Listening, reading, discussion, and composing exercises will focus student awareness on the diversity of aesthetics, styles, and techniques that exist today. CSU, UC

MUSIC-122 Theory and Musicianship I
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Note: Credit by examination option available
This course is a study of the fundamental concepts of Western music theory. These concepts are applicable to both classical and popular styles. The study addresses notation, fundamental theoretical concepts, their relationship to the evolution of musical aesthetics in Western culture, musicianship skills including sight singing, rhythmic training, ear training, dictation, and keyboard realization, and basic composition. C-ID MUS 120, MUS 125, CSU, UC

MUSIC-123 Theory and Musicianship II
4 units SC
• 54 hours lecture/54 hours laboratory per term
• Recommended: MUSIC-122 or equivalent
This course is an introductory course to the study of jazz theory with special emphasis upon spontaneous improvisation in the jazz tradition. Students will perform in class. CSU, UC

MUSIC-127 Jazz Theory and Improvisation
2 units SC
• 18 hours lecture/36 hours laboratory/18 hours laboratory by arrangement per term
• Recommended: MUSIC-122 or equivalent
This is an introductory course to the study of jazz theory with special emphasis upon spontaneous improvisation in the jazz tradition. Students will perform in class. CSU, UC

MUSIC-128 Jazz Theory and Improvisation II
2 units SC
• 18 hours lecture/36 hours laboratory/18 hours laboratory by arrangement per term
• Recommended: MUSIC-127 or equivalent
This is an intermediate course for the study of jazz theory with special emphasis on spontaneous improvisation in the jazz tradition. Students will perform in class. CSU, UC
MUSIC-130 Jazz Workshop
1 unit SC
- May be repeated three times
- 72 hours laboratory per term
- Limitation on enrollment: Audition required. Specific days and times are announced in the Schedule of Classes.

This course presents the study of skills required to play jazz, including intonation, rhythmic accuracy, tone, dynamic control, style-specific articulation, phrasing, expression, sight-reading, improvisation and practicing. A variety of styles will be studied including Medium Swing, Latin and Fusion. Skills are developed in an ensemble setting and public performances are included. New literature will be studied each semester. CSU, UC

MUSIC-133 Opera Theater
1 unit SC
- May be repeated three times
- 54 hours laboratory per term
- Prerequisite: Audition

This course provides training and experience for vocalists in the production and presentation of opera including comprehensive rehearsal and performance. Students will be assigned chorus and/or solo parts to perform on their own. All students will be given the opportunity to learn applicable elements of stagecraft and opera performance. CSU

MUSIC-134 Musical Theater Workshop
1 unit SC
- May be repeated three times
- 72 hours laboratory per term
- Prerequisite: Audition

This course provides training and experience for instrumentalists and vocalists in the production and presentation of a musical including comprehensive rehearsal and performance. CSU, UC

MUSIC-136 Jazz Ensemble
1 unit SC
- May be repeated three times
- 72 hours laboratory per term
- Prerequisite: Audition

This course is a study of performance in a jazz ensemble both as a soloist and a member of a section. Skills addressed include section and ensemble intonation, rhythmic accuracy, tone, blend, balance, style specific articulation, phrasing, and expression, and improvisation. A variety of styles will be studied including Ballad, Shuffle and Funk. Public performance is included. New literature will be studied each semester. C-ID MUS 180, CSU, UC

MUSIC-137 Jazz Combos
1-2 units SC
- May be repeated three times
- Variable hours
- Prerequisite: Audition

This is an advanced course made up of small jazz combos (instrumental and/or vocal) that rehearse and perform a variety of jazz styles. Students will improvise, sight read, and perform in a variety of small group settings, which may include off-campus venues, concerts, and festivals. CSU, UC

MUSIC-140 Wind Ensemble
1 unit LR
- May be repeated three times
- 54 hours laboratory per term
- Prerequisite: Audition

This is a performance organization whose goals include the sight-reading, rehearsal and performance of a variety of wind ensemble literature. Each member of the group will become a better musician through individual practice and performance, listening and being an active part of the ensemble experience. New literature will be performed each term. C-ID MUS 180, CSU, UC

MUSIC-142 Woodwind Ensemble
1 unit SC
- May be repeated three times
- 54 hours laboratory per term
- Prerequisite: Audition

This performance ensemble focuses on the sight-reading, rehearsal and performance of woodwind ensemble literature. Each member of the group will become a better musician through individual practice and performance, listening and being an active part of the ensemble experience. CSU, UC

MUSIC-144 Brass Ensemble
1 unit LR
- May be repeated three times
- 72 hours laboratory per term
- Prerequisite: Audition

This performance ensemble focuses on the sight-reading, rehearsal and performance of brass ensemble literature. Each member of the group will become a better musician through individual practice and performance, listening and being an active part of the ensemble experience. CSU, UC
### MUSIC-150 Beginning Piano I
1 unit SC
- 54 hours laboratory per term
This course provides group instruction in piano for students with no prior keyboard experience. Ensemble and solo works, basic rhythm, and fundamental keyboard and music theory skills based on major and minor five-note patterns will be covered. Attention is given to the student’s individual needs, goals, and abilities. CSU, UC

### MUSIC-151 Beginning Piano II
1 unit SC
- 54 hours laboratory per term
- Recommended: MUSIC-150 or equivalent
This course provides group instruction in piano. Ensemble and solo works beyond the five-finger position will be covered. Classical and popular music will be emphasized. CSU, UC

### MUSIC-152 Jazz Piano
1 unit SC
- 72 hours laboratory per term
- Recommended: MUSIC-151 or equivalent
This course provides study in the theory and practice of jazz piano through learning chords, voicings, improvisational techniques, and various idiomatic styles. CSU, UC

### MUSIC-162 Concert Choir
1 unit SC
- May be repeated three times
- 72 hours laboratory per term
- Limitation on enrollment: Audition required. Specific days and times are announced in the Schedule of Classes.
This course presents the study, rehearsal and public performance of standard choral literature for mixed voices. New literature will be studied each term. C-ID MUS 180, CSU, UC

### MUSIC-166 Chamber Singers
1 unit SC
- May be repeated three times
- Limitation on enrollment: Audition required.
- Prerequisite: Audition
Students will study and perform ancient through contemporary chamber choir literature including music influenced by non-Western cultures. C-ID MUS 180, CSU, UC

### MUSIC-168 Percussion Ensemble
1 unit SC
- May be repeated three times
- 72 hours laboratory per term
- Prerequisite: Audition
This performance ensemble focuses on the sight-reading, rehearsal and performance of percussion ensemble literature. Each member of the group will become a better musician through individual practice and performance, listening and being an active part of the ensemble experience. CSU, UC

### MUSIC-170 Applied Voice Training
1 unit SC
- 54 hours laboratory per term
Students will study and practice the fundamentals of vocal tone production, breathing, and vocal placement. Emphasis will be placed on song interpretation and vocal pedagogy. CSU, UC

### MUSIC-171 Jazz and Popular Solo Voice
1 unit SC
- 54 hours laboratory per term
This course is a study of the fundamentals of vocal tone production, breathing, vocal placement, and song interpretation as it applies to jazz, Broadway and other popular vocal styles. CSU, UC

### MUSIC-176 String Ensemble
1 unit LR
- May be repeated three times
- 72 hours laboratory per term
- Prerequisite: Audition
This performance ensemble focuses on the sight-reading, rehearsal and performance of string ensemble literature. Each member of the group will become a better musician through individual practice and performance, listening and being an active part of the ensemble experience. CSU, UC

### MUSIC-179 Intermediate Applied Voice
1 unit SC
- 54 hours laboratory per term
This course is a continued study of the fundamentals of vocal tone production, breathing, and vocal placement. Emphasis will be placed on song interpretation and vocal pedagogy. CSU, UC

### MUSIC-180 Diablo Valley Masterworks Chorale
1 unit SC
- May be repeated three times
- 72 hours laboratory per term
- Prerequisite: Audition
This course is the study and performance of major works of the choral literature, along with practical experience in the operation of a community chorus. New literature is studied each term. CSU, UC

### MUSIC-190 Topics in Music
0.3-4 units SC
- Variable hours
A supplemental course in music to provide a study of current topics in music. Specific topics will be announced in the schedule of classes. CSU
MUSIC-208 Rock Theory and Improvisation II
1 unit SC
- 60 hours laboratory per term
- Recommended: MUSIC-108 or equivalent
This course presents the intermediate study and performance of historical Rock, including Funk, Soul, R&B, and Country. Both theoretical and performance aspects will be covered. Large bands (guitars, bass, drums, percussion, keyboards, horns, and multi vocals) will be formed for class performances. Guest artists and industry experts will be featured each term. CSU

MUSIC-209 Live Music Production and Stagecraft II
1 unit SC
- 60 hours laboratory per term
- Recommended: MUSIC-109 or equivalent
This course provides the intermediate musician with professional level live-show production experience. Practical applications of stage processes from load-in to load-out, including professional level stagecraft, live sound, and light engineering will be presented. Guest artists and industry experts will be featured each term. CSU

MUSIC-222 Theory and Musicianship III
4 units SC
- 54 hours lecture/54 hours laboratory per term
- Recommended: MUSIC-123 or equivalent
This course is a study of harmony and voice-leading in the Western Common Practice. It addresses sequences, melodic and rhythmic figuration, leading-tone 7th chords, mixture, applied dominants and modulation, four-part voice leading, large formal structures, harmonic and formal analysis, and musicianship skills including sight singing, rhythmic training, ear training, dictation, and keyboard realization. C-ID MUS 140, MUS 145, CSU, UC

MUSIC-223 Theory and Musicianship IV
4 units SC
- 54 hours lecture/54 hours laboratory per term
- Recommended: MUSIC-222 or equivalent
This course is a study of chromatic harmony, 20th century harmonic practices, large musical structures, harmonic, structural, and stylistic analysis, and musicianship skills including sight singing, rhythmic training, ear training, dictation, and keyboard realization of chromatic and 20th century materials. C-ID MUS 150, MUS 155, CSU, UC

MUSIC-236 Night Jazz Band
1 unit SC
- May be repeated three times
- 72 hours laboratory per term
- Limitation on enrollment: Audition required. Specific days and times are announced in the Schedule of Classes.
This course presents the study of big band jazz for performance in classroom and community settings. A variety of styles will be studied including Swing, Hip-Hop, Afro-Cuban, and Be Bop. Community outreach and public performances at jazz clubs, community events and other venues will be emphasized. Occasionally, guest artists will be featured. New literature will be studied each semester. CSU, UC

MUSIC-240 Symphonic Band
1 unit LR
- May be repeated three times
- 72 hours laboratory per term
- Limitation on enrollment: Audition required. Specific days and times are announced in the Schedule of Classes. Students must be able to perform with rhythmic accuracy, accurate intonation, and appropriate phrasing and expression.
This course presents the study, rehearsal, and public performance of symphonic band literature, with an emphasis on the development of skills needed to perform within a symphonic band. New literature will be studied each term. C-ID MUS 180, CSU, UC

MUSIC-250 Intermediate Piano I
1 unit SC
- 54 hours laboratory per term
- Recommended: MUSIC-151 or equivalent
This course is an introduction to group study of piano at the intermediate level. The class emphasizes the development of technical and interpretive skills essential for playing early-intermediate keyboard music in Baroque and Classical styles. Methods of preparation based on an understanding of period/composer-specific performance practice will be addressed. This course is essential for the serious musician and those wishing to refine technical and interpretive understanding. CSU, UC

MUSIC-251 Intermediate Piano II
1 unit SC
- 72 hours laboratory per term
- Recommended: MUSIC-250 or equivalent
This course is for the continued group study of piano at the intermediate level. The class emphasizes the development of technical and interpretive skills essential for playing intermediate keyboard music in Romantic and Contemporary Period styles with attention to interpretation and technique. CSU, UC
MUSIC-252 Piano Ensemble
1 unit SC
• May be repeated three times
• 72 hours laboratory per term
• Prerequisite: Audition

This course is for the study and performance of piano music for multiple pianists and for piano music with vocalists and instrumentalists from a variety of classical and popular styles. This course is held in a master class format and fulfills the ensemble recommendation for MUSIC-100. Solo instrumentalists and vocalists are encouraged to audition. CSU, UC

MUSIC-255 Piano Repertoire Master Class
1 unit SC
• May be repeated three times
• 72 hours laboratory per term
• Limitation on enrollment: Audition required. Specific days and times are announced in the Schedule of Classes.

This class provides a weekly forum for pianists to perform solo repertoire and includes constructive comments and direction in a master class format. Students will produce four in-class and two public performances during the course. New keyboard works from the Baroque, Classical, Romantic, and Contemporary Period repertory will be studied each semester. CSU, UC

MUSIC-256 Pedagogy for Studio Music Teachers
1 unit SC
• 72 hours laboratory per term

This class presents a practical study of pedagogy for the private music studio. The course is designed for current and aspiring studio music teachers of keyboard and instrumental students. Students will explore ways to augment, develop, and review methods of teaching and performance, gaining the ability to successfully work with learning styles of diverse populations. CSU

MUSIC-298 Independent Study
.5-3 units SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

MUSIC-299 Student Instructional Assistant
.5-3 units SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

MUSIC INDUSTRY STUDIES – MUSX

Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

Possible career opportunities
Career options include: conductor, arranger, film scorer/composer, music business/manager, music editor, music supervisor/director, songwriter, transcriber, editor (print music publishing), choir director, midi engineering, recording engineer, studio director or manager, sound designer, sound technician, and tour coordinator. Many careers require more than two years of study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.
Music industry studies

Associate in arts degree
Music industry studies

Students completing the program will be able to...
A. produce recorded music projects.
B. demonstrate professional behaviors required in the music industry.
C. apply vocabulary and demonstrate processes that are used in the protection of intellectual property rights.

This associate in arts program prepares students for a career in the music industry. The program has an entrepreneurial focus emphasizing an industry trend requiring artists to be responsible for complete project development. The program is designed to produce well-rounded music industry professionals capable of all aspects of the music production process including recording, marketing, and distribution. The same skill-set also prepares students for careers in specialized areas of the music industry such as digital audio workstation operator, recording engineer, producer, composer, arranger, songwriter, sound designer, artist manager, distributor, and marketing representative.

The DVC music industry studies major is not intended for transfer. Option 1 (DVC General Education) is advised for students who do not intend to transfer. Students may not take a pass/no pass option for major courses. Students who intend to transfer to a four-year baccalaureate program should consult with a counselor regarding specific major preparation requirements at the transfer institution of their choice. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE).

Students must complete each of the courses required for the major with a “C” grade or higher. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

<table>
<thead>
<tr>
<th>major requirements:</th>
<th>units</th>
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<tbody>
<tr>
<td>MUSX-172</td>
<td>Introduction to Electronic Music and MIDI</td>
</tr>
<tr>
<td>MUSX-173</td>
<td>Advanced Electronic Music</td>
</tr>
<tr>
<td>MUSX-174</td>
<td>Introduction to Pro Tools</td>
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<tr>
<td>MUSX-175</td>
<td>Advanced Pro Tools</td>
</tr>
<tr>
<td>MUSX-181</td>
<td>Introduction to the Music Industry</td>
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plus at least 9 units from:

| MUSX-120 | Live Sound | 3 |
| MUSX-124 | Introduction to Music Production and Multi-Track Recording | 3 |
| MUSX-125 | Advanced Music Production and Multi-Track Recording | 3 |
| MUSX-177 | Introduction to Reason | 3 |
| MUSX-178 | Sound for Picture | 3 |
| MUSX-182 | Songwriting I | 3 |
| MUSX-183 | Artist Development in the Music Industry | 3 |
| MUSX-270 | DIY Music Production and Promotion Projects | 3 |
| MUSX-282 | Songwriting II | 3 |
| MUSX-296 | Internship in Occupational Work Experience Education in MUSX | 1-4 |

total minimum units required | 24

Certificate of achievement
Music industry studies

Students completing the program will be able to...
A. produce recorded music projects.
B. demonstrate professional behaviors required in the music industry.
C. apply vocabulary and demonstrate processes that are used in the protection of intellectual property rights.

This certificate program prepares students for a career in the music industry. The program has an entrepreneurial focus emphasizing an industry trend requiring artists to be responsible for complete project development. The program is designed to produce well-rounded music industry professionals capable of all aspects of the music production process including recording, marketing, and distribution. The same skill-set also prepares students for careers in specialized areas of the music industry such as digital audio workstation operator, recording engineer, producer, composer, arranger, songwriter, sound designer, artist manager, distributor, and marketing representative.

To earn a certificate of achievement, students must complete the required courses with a “C” grade or higher. Required courses are available in the evening and during the day.

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</tbody>
</table>

total minimum units required | 24
MUSX-120  Live Sound  
3 units  SC  
- 54 hours lecture per term  
This course is an overview of live concert sound reinforcement. Topics include basic sound system theory and its application. It also covers individual sound system component operation, including microphones, mixers, effects, power amplifiers, and speaker systems. This course offers opportunities for hands-on experiences in troubleshooting, sound checking, and mixing sound for live performance applications. C-ID CMUS 120X, CSU

MUSX-124  Introduction to Music Production and Multi-Track Recording  
3 units  SC  
- 54 hours lecture per term  
This course is designed to give the music student a working knowledge of the principles and techniques of multi-track recording. This course will explore, analyze and evaluate contemporary music production techniques and apply these techniques to real production and recording situations. Emphasis will be on student involvement with various interrelated roles, including that of studio musician, writer/arranger, producer and sound engineer. C-ID CMUS 130X, CSU

MUSX-125  Advanced Music Production and Multi-Track Recording  
3 units  SC  
- 54 hours lecture per term  
- Recommended: MUSX-124 or equivalent  
This course extends basic practical music production and multi-track recording skills to include complex projects, integration of acoustic and digital recording elements, and use of current computer software in the mixing process. CSU

MUSX-150  Topics in Music Industry Studies  
.3-.4 units  SC  
- Variable hours  
A supplemental course in music industry studies designed to provide a study of current concepts and problems in music industry studies. Specific topics to be announced in the schedule of classes. CSU

MUSX-172  Introduction to Electronic Music and MIDI  
3 units  SC  
- 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term  
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.  
This is an introductory course that provides the foundational skills necessary for the creation of electronic music on a digital audio workstation capable of utilizing MIDI (Musical Instrument Digital Interface). Students will gain direct hands-on experience with MIDI-capable synthesizers, tone generators and samplers, digital signal processors, and computer-based music sequencing software. C-ID CMUS 110X, CSU

MUSX-173  Advanced Electronic Music  
3 units  SC  
- 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term  
- Recommended: MUSX-172 or equivalent  
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.  
This advanced course builds upon the knowledge and technical skills developed in MUSX-172 Introduction to Electronic Music and Musical Instrument Digital Interface (MIDI). The integration of MIDI and digital audio recording environments will be studied as well as the development of advanced post production skills needed for employment in the music recording industry. Topics will include digital audio recording and editing, effects processing, mixing, and digital audio file management and conversion, sampling, synthesis, and advanced MIDI sequencing. CSU

MUSX-174  Introduction to Pro Tools  
3 units  SC  
- 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term  
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.  
This is an introductory course that will provide the foundational skills to learn and function within the Pro Tools audio production environment. Pro Tools represents a new generation of digital audio workstations that uses the power of personal computers and digital signal processing to record multitrack digital audio directly to hard disk. Topics will include digital multitrack recording, effects processing and digital audio mixing techniques. CSU
MUSX-175  Advanced Pro Tools  
3 units  SC  
- 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term  
- Recommended: MUSX-174 or equivalent  
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This is an advanced course designed for students who are preparing for employment in the music recording industry. Students will work on special production-oriented projects utilizing a Pro Tools capable digital audio workstation (DAW). Working independently and in teams, students will use the recording production tools that they have developed in prior semesters. Topics include acoustic recording, field recording, sound design, sound for picture, control surfaces, use of external signal processors, surround sound, and advanced mixing techniques. CSU

MUSX-176  Introduction to Ableton Live  
3 units  SC  
- 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term  

This course presents skills used within the music production software Ableton Live. Topics will include music sequencing, digital audio recording, software synthesis, sampling, Musical Instrument Digital Interface (MIDI), MIDI mapping, virtual effects, automation, signal flow, and mixing. CSU

MUSX-177  Introduction to Reason  
3 units  SC  
- 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term  
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course will provide the foundational skills needed to learn and function within the music production environment of Reason. This software application represents a new generation of the stand-alone virtual recording studio. Topics will include music sequencing, digital audio recording, software synthesis and sampling, virtual effects, automation, signal flow, and drum machines. CSU

MUSX-178  Sound for Picture  
3 units  SC  
- 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term  
- Recommended: MUSX-174 or equivalent  
- Note: Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This class examines the topic of sound for picture through a combination of lecture and hands-on experience with a Digital Audio Workstation that is video capable. Students will develop the skill set needed to create soundtracks for film, television, commercials, and video games. Students will learn the three layers of sound for picture: dialog, music, and sound effects including Foley and ambiance. Each of these layers will be discussed and worked on in depth through lab projects. CSU

MUSX-181  Introduction to the Music Industry  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent

This course presents an introduction to the music industry, including its evolution, corporate structure, and legal practices. Topics include record production, music publishing, marketing, use of music in film, television, and advertising, touring, development and implementation of business plan, and career strategies. CSU

MUSX-182  Songwriting I  
3 units  SC  
- 54 hours lecture per term

In this course, students will study the process of songwriting. Songs will be analyzed in terms of chord structure, form, rhythm, melody, harmony, and lyrics. Original compositions and performances will be expected from all students. C-ID CMUS 150X, CSU

MUSX-183  Artist Development in the Music Industry  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent

This course presents the skills and techniques utilized by music industry professionals responsible for the identification, development, and promotion of successful artists. Tools such as identifying talent, building an artist development team, networking, and structuring a cohesive development plan are explored. Career options, such as artist management, Artists and Repertoire (A&R), sync and licensing, public relations, and social network promotions will be reviewed. This course is also designed to assist the do it yourself (DIY) musician in developing the skills and techniques used in self-management. CSU
MUSX-270  DIY Music Production and Promotion Projects
3 units  SC
• 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term
• Recommended: MUSX-124, 172, 174, 181 or equivalents
This course provides students the opportunity to work on special production-oriented projects utilizing the college’s internet radio station and record label as a laboratory. Working independently and in teams, students will apply the music production tools and business skills they have developed in prior semesters of the Music Industry Studies program. CSU

MUSX-282  Songwriting II
3 units  SC
• 54 hours lecture per term
• Recommended: MUSX-182 or equivalent
This course presents the continued study of the structural, rhythmic, melodic, harmonic, and lyrical components of a song. Original compositions and performances are required of all students. CSU

MUSX-295  Occupational Work Experience Education in MUSX
1-4 units  SC
• May be repeated three times
• Variable hours
• Note: In order to enroll in MUSX-295, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.
MUSX-295 is supervised employment that extends classroom learning to the job site and relates to the student’s chosen field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

NATURAL SCIENCE
See Biological science - BIOSC

NUTRITION – NUTRI
Diablo Valley College is approved by the California Board of Registered Nurses for continuing education credits (Provider #CEP 7992). Nutrition courses that can be used are NUTRI-115 and 160.

Tish Young, Dean
Biological and Health Sciences Division
Physical Sciences Building, Room 263

Possible career opportunities
Courses offered within the nutrition discipline prepare students for numerous career paths. These courses begin to prepare the student for careers in food science, dietetics, nursing, dental hygiene, restaurant management, and sports nutrition as well as many other food related or health related professions. Specific courses also meet the requirements for certain certificate program and majors offered at DVC and other colleges.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.
Nutrition

Associate in science in nutrition and dietetics for transfer

Students completing the program will be able to...
A. analyze data and critique information in the nutritional sciences.
B. identify nutrition-related chronic diseases by applying knowledge of nutrient functions, food sources and physiologic systems.
C. explain how genetics and life style factors affect nutritional and health status.
E. assess a diet for nutrient adequacy using a current computerized USDA database.

The associate in science in nutrition and dietetics for transfer offers students basic knowledge in microbiology, human anatomy and physiology, chemistry and nutrition. It is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn the degree, students must complete 60 required term units of CSU-transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Students with degrees in nutrition and dietetics find employment within a wide range of organizations, such as medical facilities, research labs, government agencies, universities, pharmaceutical companies, and the food industry. This degree is also an excellent preparation for students planning to continue training in medicine, public health and/or other allied health sciences.

The associate in science in nutrition for transfer is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:
- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

To earn a grade of “C” or higher in all courses required for the major, students transferring to a CSU campus that accepts this degree are required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

In order to earn the degree, students must:
- Complete 60 semester units after transfer.
- Complete 54 hours lecture per term.
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Credit by examination option available

This course is an introduction to nutrition designed for a variety of majors. The focus of this course is the application of basic nutrition concepts to personal life skills. The interface of culture, socioeconomic conditions and personal behaviors with nutritional health will be examined. Practical application of the course content includes, but is not limited to, personal nutrition assessments and diet planning. CSU, UC (credit limits may apply to UC - see counselor)

NUTRI-115 Nutrition and Health: Personal Applications

3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Credit by examination option available

This course is an introduction to nutrition designed for a variety of majors. The focus of this course is the application of basic nutrition concepts to personal life skills. The interface of culture, socioeconomic conditions and personal behaviors with nutritional health will be examined. Practical application of the course content includes, but is not limited to, personal nutrition assessments and diet planning. CSU, UC (credit limits may apply to UC - see counselor)
NUTRI-120 Sports Nutrition: Fueling the Athlete
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course includes the integration of the principles of nutrition and physical exercise in order to optimize physical fitness and athletic performance. Topics will include nutritional needs of the athlete like diet planning to optimize physical performance; diet analysis; energy systems and metabolism; efficiency of nutritional ergogenics; dietary supplements; sports drinks; the role of protein, carbohydrates, fats, vitamins, minerals and water in physical performance; body composition; weight gain; weight loss and weight maintenance; eating disorders, and the specific nutritional needs for different types of athletes and sports events. CSU

NUTRI-130 Food and Nutrition: Cross Cultural Perspectives
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course examines the regional, ethnic, cultural, gender, religious, historical, and social influences on food patterns, cuisines, and health and healing, as well as how food is viewed as an expression of cultural diversity. Students will explore traditional foods of geographic areas and cultures. The geographic factors in food availability, global food issues, dietary habits, and socioeconomic influences on food culture, and nutrition problems of various ethnic groups will also be examined. The course also addresses nutrition consequences of ethnic food choices and sanitation and safety practices. CSU, UC

NUTRI-150 Topics in Nutrition
.3-4 units  SC
• Variable hours
This course will supplement topics in the nutritional sciences, dietetics, food service and food technology. Specific topics will be announced in the schedule of classes. CSU

NUTRI-160 Nutrition: Science and Applications
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course covers scientific concepts of nutrition related to the function of nutrients in basic life processes and current health issues with emphasis on individual needs. Course content is appropriate for majors in Dental Hygiene, Nutritional Science, Nursing and Health Science. C-ID NUTR 110, CSU, UC (credit limits may apply to UC - see counselor)

OCÉANOGRAPHY – OCEAN

Tish Young, Dean
Biological and Health Sciences Division
Physical Sciences Building, Room 263

Possible career opportunities
The diverse range of subjects examined and the multi-disciplinary approach taken within the oceanography program prepares students for a variety of career paths. Courses focus on biological, physical, geological and chemical aspects of oceanography. Many oceanographers are employed as researchers and/or educators by public and private research institutions, universities, and colleges. Students graduating with degrees in oceanography or aquatic science fields may work as laboratory or field technicians; water monitoring specialists; for environmental protection, consulting and nonprofit firms; as observers aboard fishing vessels; or in the natural resource management fields. Limited numbers are employed to work with marine animals at aquariums, theme parks, or research facilities. Most career options are likely to require more than two years of college study.

OCEAN-101 Fundamentals of Oceanography
3 units  SC
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: This course does not include a laboratory. Students requiring or wanting a laboratory to accompany this course should enroll in OCEAN 102. Students who have successfully completed OCEAN-102 should not enroll in OCEAN-101. Students who have successfully completed OCEAN-102 will not receive credit for OCEAN-101.

This course is an introduction to the geological, chemical, physical and biological aspects of the world's oceans and interactions amongst these different aspects. Topics include: The history of oceanography; historic and modern oceanographic instruments; plate tectonics and marine geology; the marine-land interface; ecological problems of the local bay, estuary, delta and state wide water resources; oceans' roles as a dominant influence on the earth, its climate, and the lives of its inhabitants; food, drug, and mineral energy resources from the sea; global and local ocean resource management, aquacultural techniques and practices, and preservation of marine environments; and the deep sea: properties, animals and adaptations. CSU, UC (credit limits may apply to UC - see counselor)
Oceanography

OCEAN-102 Fundamentals of Oceanography with Laboratory
4 units SC
- 54 hours lecture/54 hours laboratory per term
- Recommended: Eligibility for ENGL-122 or equivalent
- Note: Students who have successfully completed OCEAN-101 should not enroll in OCEAN-102. Students who have successfully completed OCEAN-101 will not receive credit for OCEAN-102.

This course is an introduction to the geological, chemical, physical and biological aspects of the world's oceans and interactions among them. Topics will include: the history of oceanography; historic and modern oceanographic instruments; plate tectonics and marine geology; the marine-land interface; ecological problems of the local bay, estuary, delta and state wide water resources; oceans' roles as a dominant influence on the earth, its climate, and the lives of its inhabitants; food, drug, and mineral energy resources from the sea; global and local ocean resource management, aquacultural techniques and practices, and preservation of marine environments; and the deep sea: properties, animals and adaptations. In the laboratory, students will experience the role of the oceanographer as they prepare for, participate in, and analyze data collected on research trips to local bay environments. CSU, UC (credit limits may apply to UC - see counselor)

OCEAN-150 Topics in Oceanography
.3-4 units SC
- Variable hours
A supplemental course in oceanography to provide a study of current concepts and problems in oceanography and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

OCEAN-299 Student Instructional Assistant
.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

PERSIAN – PERSN

Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

Possible career opportunities
The study of Persian can open up opportunities in communications, foreign trade and banking, transportation, government, the Foreign Service, tourism, library services, teaching, professional translating, journalism, and all levels of education, including university teaching. Most foreign language careers require more than two years of study.

PERSN-120 First Term Persian
5 units SC
- 90 hours lecture per term
- Note: This course is equivalent to two years of high school study.

This is a basic beginning course in understanding, speaking, reading, and writing Persian. It offers a balanced approach to the language and culture. Basic communicative functions and structures are introduced, as well as a basic exploration of the culture, history and geography of the Persian-speaking world. CSU, UC

PERSN-121 Second Term Persian
5 units SC
- 90 hours lecture per term
- Prerequisite: PERSN-120 or two years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is the second course in a sequence of Persian language courses. Topics will include understanding, speaking, reading and writing of the Persian language. The course will continue to expand vocabulary, communicative functions and structures and further examine the cultures of the Persian-speaking countries. CSU, UC

PERSN-150 Topics in Persian
.3-4 units SC
- Variable hours
A supplemental course in Persian to provide a study of current concepts and problems in Persian and related subdivisions. Specific topics will be announced in the schedule of classes. CSU
PERSN-299 Student Instructional Assistant

- 0.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

PHILOSOPHY – PHILO

Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

Possible career opportunities

For those who wish for a career in philosophy, teaching and research at the university level is an attractive option. There is also an emerging demand for experts in applied ethics, especially in the areas of medical, business, environmental ethics, law, politics and information technology. Most career options will require an advanced degree.

Program-level student learning outcomes

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts degree

Philosophy

Students completing the program will be able to...

A. use their critical thinking skills to analyze and evaluate both formally and informally, arguments and positions taken regarding various philosophical topics.

B. compare and contrast various philosophical perspectives, both historically and in the context of larger philosophical texts.

C. recognize and explain the integration of philosophical perspectives and ideas in selected cultural, historical, and thematic contexts.

D. demonstrate their ability to articulate clearly in oral and written form an objective analysis of major works from the various philosophic and religious literatures.

The Philosophy Department views critical thinking and reflection about distinctively human issues to be central to human existence and well-being. Students able to think and articulate viewpoints clearly and in an informed fashion not only enhance their own life, but contribute significantly to interpersonal relationships and social existence, including in the realm of political, economic, cultural, and social institutions.

The program prepares students with effective thinking and communication skills, which are useful in many fields including business, sales, writing, teaching, legal profession, political campaigning, news reporting, and other fields in which critical thinking and eloquent articulation of viewpoints is required.

Although this program is not designed as a transfer program, selected courses in the program do meet general education and lower division requirements for the bachelor of arts degree at many California State University and University of California campuses. Consult with department faculty and the counseling department for more information. DVC philosophy students who intend to transfer must consult with a program adviser or counselor to ensure that the requirements for transfer to the baccalaureate institution of their choice are met.

Students who intend to transfer area advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE). General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer.

To earn an associate in arts degree with a major in philosophy, students must complete five core courses (15 units total) supplemented by a set of restricted electives from which students select one course (3 units). Students must complete each course used to meet a major requirement with a grade of "C" or higher and also maintain an overall GPA of 2.5 or higher in the coursework required for the major. Certain courses may satisfy both major and general education requirements; however, the units are only counted once.

major requirements: units

PHILO-120 Introduction to Philosophy .................................................. 3
PHILO-122 Introduction to Ethics .............................................................. 3
PHILO-130* Logic and Critical Thinking .................................................. 3
PHILO-224 History of Western Philosophy: Pre-Socratic to Medieval Period .......................................................... 3
PHILO-225 History of Western Philosophy: Descartes to Present .......................................................... 3

plus at least 3 units from:

PHILO-140 Introduction to Judeo-Christian Tradition..................... 3
PHILO-141 Introduction to the Philosophy of Religion .................... 3
PHILO-220 Comparative Religions ............................................................ 3

total minimum required units 18

*This course has a prerequisite of ENGL-122.
Philosophy

Associate in Arts in Philosophy for Transfer

Students completing the program will be able to...

A. use their critical thinking skills to analyze and evaluate, both formally and informally, arguments and positions taken regarding various philosophical topics.

B. compare and contrast various philosophical perspectives, both historically and in the context of larger philosophical texts.

C. recognize and explain the integration of philosophical perspectives and ideas in selected cultural, historical and thematic contexts.

D. demonstrate their ability to articulate clearly in oral and written form an objective analysis of major works from the various philosophic and religious literature.

The humanities and philosophy department views critical thinking and reflection about distinctively human issues to be central to human existence and well-being. Students who are able to think and articulate viewpoints clearly and in an informed fashion not only enhance their own lives, but contribute significantly to interpersonal relationships and social existence, including in the realm of political, economic, cultural, and social institutions.

The associate in arts in philosophy for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major. The associate in arts in philosophy for transfer is consistent with the mission of the community college to assist students in achieving a seamless transfer to the CSU system.

In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education-Breadth pattern (CSU GE-Breadth); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of C or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Students must complete each course used to meet a major requirement with a “C” grade or higher. Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

major requirements: at least 3 units from:

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>PHILO-120 Introduction to Philosophy</td>
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<tr>
<td>PHILO-122 Introduction to Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHILO-130* Logic and Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>PHILO-170 Symbolic Logic</td>
<td>3</td>
</tr>
<tr>
<td>PHILO-224 History of Western Philosophy: Pre-Socratic to Medieval Period</td>
<td>3</td>
</tr>
<tr>
<td>PHILO-225 History of Western Philosophy: Descartes to Present</td>
<td>3</td>
</tr>
<tr>
<td>PHILO-141 Introduction to the Philosophy of Religion</td>
<td>3</td>
</tr>
<tr>
<td>PHILO-220 Comparative Religions</td>
<td>3</td>
</tr>
</tbody>
</table>

total minimum required units 18

*This course has a prerequisite of ENGL-122.

Certificate of Achievement

Philosophy

Students completing the program will be able to...

A. use their critical thinking skills to analyze and evaluate both formally and informally, arguments and positions taken regarding various philosophical topics.

B. compare and contrast various philosophical perspectives, both historically and in the context of larger philosophical texts.

C. recognize and explain the integration of philosophical perspectives and ideas in selected cultural, historical, and thematic contexts.

D. demonstrate their ability to articulate clearly in oral and written form an objective analysis of major works from the various philosophic and religious literatures.

To earn a certificate of achievement in philosophy, students must complete four core courses (12 units). The certificate program courses also count towards the “major” that is required for the associate in arts degree in philosophy.

required courses: units

<table>
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<tr>
<td>PHILO-120 Introduction to Philosophy</td>
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<tr>
<td>PHILO-122 Introduction to Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHILO-130* Logic and Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>PHILO-224 History of Western Philosophy: Pre-Socratic to Medieval Period</td>
<td>3</td>
</tr>
</tbody>
</table>

total minimum required units 12

*This course has a prerequisite of ENGL-122.
PHILO-120  Introduction to Philosophy  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
This course carefully and critically examines the most basic of human beliefs. Logic, epistemology, metaphysics, value theory (ethics and aesthetics), and philosophy of religion are explored at an introductory level. The vocabulary of philosophy and techniques of inquiry are included. C-ID PHIL 100, CSU, UC

PHILO-122  Introduction to Ethics  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
This course is a systematic examination of major ethical theories, the nature of moral reasoning, as well as the evaluation of contemporary moral issues such as abortion, euthanasia and capital punishment. C-ID PHIL 120, CSU, UC

PHILO-130  Logic and Critical Thinking  
3 units  SC  
• 54 hours lecture per term  
• Prerequisite: ENGL-122 or equivalent  
This course introduces students to the principles of inductive and deductive inference and their practical applications in everyday situations such as problem solving and evaluation of arguments. The uses of language, formal and informal fallacies, syllogistic argument forms and scientific method will be examined. Additional emphasis is placed on developing the ability to integrate the principles of critical thinking with the techniques of effective written argument. C-ID PHIL 110, CSU, UC

PHILO-140  Introduction to Judeo-Christian Tradition  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
This course presents a critical examination of history, theology, literature, and traditions of Judaism and Christianity. CSU, UC

PHILO-141  Introduction to the Philosophy of Religion  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
This course is a general introduction to the nature of religion. Students will analyze central themes including revelation, faith, and miracles and issues such as the problem of evil, and the relationship between religion and science. CSU, UC

PHILO-150  Topics in Philosophy  
.3-4 units  SC  
• Variable hours  
A supplemental course in philosophy to provide a study of current concepts and problems in philosophy and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

PHILO-160  Introduction to Social and Political Philosophy  
3 units  SC  
• 54 hours lecture per term  
• Recommended: PHILO-120 or equivalent  
This course is an introduction to the major authors, central issues, and political and philosophical perspectives as presented through classical and contemporary reading selections. Philosophers studied include Plato, Aristotle, Hobbes, Locke, Mill, Rawls, and Nozick. Topics include the nature of democracy, fascism, justice, rights, law, liberty, political authority, political principles, and consequences, with an emphasis on understanding these political theories as normative rather than descriptive. Critical analysis of each perspective in political philosophy will be engaged. CSU, UC

PHILO-170  Symbolic Logic  
3 units  SC  
• 54 hours lecture per term  
• Recommended: PHILO-130 or equivalent; eligibility for ENGL-122 or equivalent  
This course introduces the principles of valid deductive reasoning and includes a study of formal techniques of sentential and predicate logic. Students will learn how to use truth-tables for propositional connectives and interpretations for statements of first-order logic using mathematical theory. The conclusion of the course will engage students in issues such as the completeness of propositional calculus, fuzzy logic, and deontic logic. C-ID PHIL 210, CSU, UC

PHILO-220  Comparative Religion  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
The religious thought, experience, and ethical teachings of living religions of the world are examined, discussed and compared. Religions, which may be discussed, include Hinduism, Buddhism, Jainism, Sikhism, Zoroastrianism, Judaism, Christianity, and Islam. CSU, UC

PHILO-224  History of Western Philosophy: Pre-Socratic to Medieval Period  
3 units  SC  
• 54 hours lecture per term  
• Recommended: Eligibility for ENGL-122 or equivalent  
This course considers the philosophy of the pre-Socratic, Golden Age of Greek philosophy, and the Hellenistic and Medieval periods. C-ID PHIL 130, CSU, UC
PHILO-225 History of Western Philosophy: Descartes to Present
3 units SC
• 54 hours lecture per term
This course examines continental rationalism (Descartes, Spinoza, and Leibniz), British empiricism (Locke, Berkeley, and Hume), Kant, 19th century and 20th century philosophy. C-ID PHIL 140, CSU, UC

PHILO-298 Independent Study
.5-3 units SC
• Variable hours
• Recommended: Eligibility for ENGL-122 or equivalent
• Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

PHILO-299 Student Instructional Assistant
.5-3 units SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

PHYSICAL SCIENCE – PHYSC
Tish Young, Dean
Physical Sciences and Engineering Division
Physical Sciences Building, Room 263

Possible career opportunities
Physical science focuses on concepts, processes and the inter-relationship of physical phenomena as studied in any combination of the physical science disciplines, such as astronomy, earth science and physics. There are several career options in academics - research and teaching, as well as applied science and industry. Many of the career options require advanced and specialized training in one or a combination of the sub-disciplines of physical science.

PHYSC-112 Fundamentals of Physical Science
3 units SC
• 54 hours lecture per term
• Prerequisite: MATH-090 or MATH-090E or MATH-090SP or equivalent
• Recommended: Eligibility for ENGL-122 or equivalent
This course is an overview of the physical sciences of astronomy, physics, chemistry and earth science. The principles studied will be used to explain current knowledge of the universe and our physical environment. CSU, UC (credit limits may apply to UC - see counselor)

PHYSC-298 Independent Study
.5-3 units SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU
Possible career opportunities
Career opportunities available for physicists include: research in industry, universities, and national laboratories. Many teach in high schools, colleges, and universities. Others can be found in hospitals, the military, oil fields, power plants, in the astronaut corps, in museums, in patent law firms, and in management positions in business and government. A background in physics can help a technical writer or a computer programmer. Most career options require more than two years of college study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science in physics for transfer
Students completing the program will be able to...
A. solve problems in mechanics, including mechanical waves and fluids, using calculus.
B. solve problems in thermodynamics using calculus.
C. solve problems in electromagnetism using calculus.
D. solve problems in optics using calculus.
E. solve problems in special relativity using calculus.
F. solve problems in quantum physics, including its applications, using calculus and differential equations.

The associate in science in physics for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:
• Complete 60 semester CSU-transferable units.
• Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
• Complete a minimum of 18 semester units in the major.
• Obtain a minimum grade point average (GPA) of 2.0.
• Earn a grade of “C” or higher in all courses required for the major.

Physicists transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSU GE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

<table>
<thead>
<tr>
<th>major requirements:</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH-192 Analytic Geometry and Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH-193 Analytic Geometry and Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>MATH-292 Analytic Geometry and Calculus III</td>
<td>5</td>
</tr>
<tr>
<td>PHYS-130 Physics for Scientists and Engineers A: Mechanics and Wave Motion</td>
<td>4</td>
</tr>
<tr>
<td>PHYS-230 Physics for Scientists and Engineers B: Heat and Electro-Magnetism</td>
<td>4</td>
</tr>
<tr>
<td>PHYS-231 Physics for Scientists and Engineers C: Optics and Modern Physics</td>
<td>4</td>
</tr>
<tr>
<td><strong>total minimum required units</strong></td>
<td><strong>27</strong></td>
</tr>
</tbody>
</table>

**PHYS-110 Elementary Physics**

3 units LR
• 54 hours lecture per term
• Prerequisite: MATH-120 or MATH-120SP or equivalent
• Recommended: Concurrent enrollment in PHYS-111 and eligibility for ENGL-122 or equivalents
• Note: Students specifically interested in focusing on modern physics should take PHYS-113.

This course provides an overview of physics. Forces, motion, heat, electricity and magnetism, optics and modern physics will be discussed. This course emphasizes topics in classical physics. CSU, UC (credit limits may apply to UC - see counselor)

**PHYS-111 Physics Laboratory**

1 unit LR
• 54 hours laboratory per term
• Prerequisite: PHYS-110 or equivalent (may be taken concurrently)
• Recommended: Eligibility for ENGL-122 or equivalent

This laboratory course will include measurement and analysis of mechanical, thermal, electrical and optical phenomena. CSU, UC (credit limits may apply to UC - see counselor)
### PHYS-113 Elementary Modern Physics: From Atoms to the Big Bang

3 units, SC  
- 54 hours lecture per term  
- Prerequisite: MATH-120 or equivalent  

This course is an introduction to the ideas of modern physics. Topics will include the relativity of space and time, Einstein's theory of gravity, the Big Bang Theory of the origin of the universe, the birth and death of stars, black holes, photons, atoms, quantum uncertainty, the nucleus, radioactivity, and nuclear energy. The emphasis will be on concepts, not mathematical problem solving. CSU, UC

### PHYS-120 General College Physics I

4 units, LR  
- 54 hours lecture/72 hours laboratory per term  
- Prerequisite: MATH-121 or equivalent  
- Recommended: Eligibility for ENGL-122 or equivalent  

This course is the first-term college physics for life science majors and others. It includes a lecture and laboratory study of mechanics, heat and sound. C-ID PHYS 105, CSU, UC (credit limits may apply to UC - see counselor)

### PHYS-121 General College Physics II

4 units, LR  
- 54 hours lecture/72 hours laboratory per term  
- Prerequisite: PHYS-120 or equivalent  

This is a second term college physics course for life science majors and others. It includes a lecture and laboratory study of mechanics, heat and sound. C-ID PHYS 110, CSU, UC (credit limits may apply to UC - see counselor)

### PHYS-124 Calculus Supplement for Physics 120

.5 units, LR  
- 9 hours lecture per term  
- Prerequisite: PHYS-120 (may be taken concurrently) and MATH-182 or MATH-192 (may be taken concurrently) or equivalents  
- Recommended: Eligibility for ENGL-122 or equivalent  
- Note: The calculus component may be required for certain transfer majors

This course adds calculus to the mathematical techniques used in PHYS-120 General College Physics I. CSU, UC (credit limits may apply to UC - see counselor)

### PHYS-125 Calculus Supplement for Physics 121

.5 units, LR  
- 9 hours lecture per term  
- Prerequisite: PHYS-121; and MATH-183 or MATH-193 (all may be taken concurrently) or equivalents  
- Recommended: Eligibility for ENGL-122 or equivalent  
- Note: The calculus component may be required for certain transfer majors

This course adds calculus to the mathematical techniques used in PHYS-121 General College Physics II. CSU, UC (credit limits may apply to UC - see counselor)

### PHYS-129 Introductory Physics for Engineers

4 units, LR  
- 54 hours lecture/72 hours laboratory per term  
- Co-requisite: MATH-192 or equivalent (may be taken previously)  
- Recommended: Eligibility for ENGL-122 or equivalent  
- Note: For those students who have not recently completed a full year of high school physics, the physics department strongly recommends completion of PHYS-129 before enrolling in PHYS-120  

This course is designed for engineering, physics and chemistry majors. The student will be introduced to basic vocabulary and techniques of studying physics. It presents a study of vectors, motion, forces, momentum, energy and rotating systems. One or more additional topics such as geometric optics, electricity, the atomic nature of matter or the study of fluids will be presented. CSU, UC (credit limits may apply to UC - see counselor)

### PHYS-130 Physics for Engineers and Scientists A: Mechanics and Wave Motion

4 units, LR  
- 54 hours lecture/72 hours laboratory per term  
- Co-requisite: MATH-193 (may be taken previously) or equivalent  
- Recommended: PHYS-129 and eligibility for ENGL-122 or equivalents  
- Note: For those students who have not recently completed a full year of high school physics, the completion of PHYS-129 is strongly recommended.

This course is designed for engineering and physical science majors (such as physics, chemistry, and geology). It presents a lecture and laboratory study of classical mechanics: vectors, particle kinematics, Newton’s laws, equilibrium of rigid bodies, work and energy, gravitation, fluids, momentum, rotational kinematics and dynamics, and oscillations and waves in elastic media. C-ID PHYS 205, CSU, UC (credit limits may apply to UC - see counselor)

### PHYS-150 Topics in Physics

.3-4 units, SC  
- Variable hours

A supplemental course in physics to provide a study of current concepts and problems in physics. Specific topics will be announced in the schedule of classes. CSU
PHYS-230  Physics for Engineers and Scientists  
B: Heat and Electro-Magnetism

4 units  LR  
- 54 hours lecture/72 hours laboratory per term  
- Prerequisite: PHYS-130 or equivalent; MATH-292 (may be taken concurrently) or equivalent  
- Recommended: Eligibility for ENGL-122 or equivalent  

Designed for engineering and physical science majors (such as physics, chemistry, and geology), this course is a continuation of PHYS-130. It is a lecture and laboratory study of thermodynamics, electricity, and magnetism. Topics included are temperature, heat and the first and second laws of thermodynamics, kinetic theory of gases, electric field and electric potential of static charges, magnetic field of moving charges, current, voltage, resistance, capacitance, induced electric fields, Maxwell’s equations and plane electromagnetic waves. C-ID PHYS 210, CSU, UC (credit limits may apply to UC - see counselor)

PHYS-231  Physics for Engineers and Scientists  
C: Optics and Modern Physics

4 units  LR  
- 54 hours lecture/72 hours laboratory per term  
- Prerequisite: PHYS-230 or equivalent; MATH-294 (may be taken concurrently) or equivalent  
- Recommended: Eligibility for ENGL-122 or equivalent  

Designed for engineering, physics and chemistry majors, this course is a continuation of PHYS-130 and 230. It is a lecture and laboratory study of optics and modern physics. Topics included are light as an electromagnetic wave, geometric and wave optics, special relativity, quantum physics, atomic and molecular physics, condensed matter physics, and nuclear physics. C-ID PHYS 215, CSU, UC (credit limits may apply to UC - see counselor)

PHYS-299  Student Instructional Assistant

.5-3 units  SC  
- Variable hours  
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

PLUMBING – PLUMB

Tish Young, Dean  
Physical Sciences and Engineering Division  
Physical Sciences Building, Room 263

Possible career opportunities

In collaboration with Plumbers and Steamfitters Union Local 159 email: info@plumbers159.org and Plumbers-Steamfitters-Refrigeration Union Local 342 www.ua342.org, DVC offers two five-year apprenticeship programs: steamfitting and plumbing. Apprenticeship is training that is designed to prepare an individual for a career in the skilled crafts and trades. Apprentices develop technical skills, experience the sharing of assignments and see how technical tasks relate specifically with theoretical knowledge and interpretation. Apprentices earn a wage while learning. Enrollment in this program is restricted. You must be registered as an apprentice with the State of California to participate in the program and accepted into the apprenticeship program by our Union partners.

Plumbers-Steamfitters-Refrigeration Union Local 342, Joint Apprenticeship and Journeymen Training Office  
935 Detroit Avenue  
Concord, CA 94518-2501  
925-686-0730

Plumbers and Steamfitters Local 159  
1308 Roman Way  
Martinez, CA 94553  
800-443-0220 or 925-229-0883  
email: info@plumbers159.org

Program-level student learning outcomes

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree  
Plumbing

Students completing the program will be able to...  
A. discuss the role the plumber plays in a safe work site.  
B. apply mathematical formulae used in plumbing.  
C. demonstrate knowledge of the hazards of cross connection in the potable water system.  
D. use the proper method to install medical gas piping.  
E. explain the responsibilities of the many agencies, departments, and specific districts that require variances or permits for construction.  
F. demonstrate advanced worksite operations including T-drilling, hot taps, and freeze pipe installation.
Upon successful completion of the program, the student will have the necessary knowledge and skill for a career in residential, commercial, and industrial plumbing. Reading of blueprints, layout, estimating, installation of piping systems and fixtures, repair of supply and waste water systems are just some of the skills that will be mastered during this program.

A student is eligible for graduation with an associate in science degree after the satisfactory completion of a minimum of 60 units.

To earn an associate in science degree with a major in plumbing, students must complete each course used to meet a major requirement with a “C” grade or higher and complete general education requirements as listed in the catalog. Degree requirements can be completed by attending classes in the day, the evening, or both. Certain courses may satisfy both major and general education requirements; however, the units are only counted once. General Education Option 1 (DVC General Education) is appropriate for students who do not intend to transfer. DVC Plumbing students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to four-year institutions of their choice are met. Students who intend to transfer are advised to select either General Education Option 2 (IGETC) or Option 3 (CSU GE).

### Certificate of achievement

**Plumbing**

Students completing the program will be able to...

A. discuss the role the plumber plays in a safe work site.
B. apply mathematical formulae used in plumbing.
C. demonstrate knowledge of the hazards of cross connection in the potable water system.
D. use the proper method to install medical gas piping.
E. explain the responsibilities of the many agencies, departments, and specific districts that require variances or permits for construction.
F. demonstrate advanced worksite operations including T-drilling, hot taps, and freeze pipe installation.

<table>
<thead>
<tr>
<th>required courses:</th>
<th>units</th>
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<tbody>
<tr>
<td>PLUMB-112 Water Supply Systems</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>PLUMB-113 Sewage Disposal</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>PLUMB-114 Plumbing System Service and Repair</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>PLUMB-115 Construction Management in Plumbing</td>
<td>1.5-3</td>
</tr>
<tr>
<td>PLUMB-116 Medical Gas Systems</td>
<td>1.5-2.5</td>
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<tr>
<td>PLUMB-117 Related Science in the Piping Trades</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>PLUMB-119 Advanced Drawing in the Piping Trades</td>
<td>1.5-2.5</td>
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<tr>
<td>PLUMB-120 Plumbing Tool Workshop I</td>
<td>1.5-2.5</td>
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<tr>
<td>PLUMB-121 Plumbing Tool Workshop II</td>
<td>1.5-2.5</td>
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<tr>
<td>PLUMB-122 Plumbing Code I</td>
<td>1.5-2.5</td>
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<tr>
<td>PLUMB-123 Plumbing Code II</td>
<td>1.5-2.5</td>
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<tr>
<td>PLUMB-124 Welding for Plumbers</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>PLUMB-125 Electricity for Plumbing</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>PLUMB-126 Gas Installation in Plumbing</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>PLUMB-127 Backflow Prevention</td>
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<tr>
<td>PLUMB-128 Plumbing Fixtures</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>PLUMB-129 Certification Preparation</td>
<td>1.5-2.5</td>
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</table>

**total minimum required units** 28

### Certificate of accomplishment

**Plumbing**

Students completing the program will be able to...

A. discuss the role the plumber plays in a safe work site.
B. apply mathematical formulae used in plumbing.
C. demonstrate knowledge of the hazards of cross connection in the potable water system.
D. use the proper method to install medical gas piping.

<table>
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<tr>
<th>required courses:</th>
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<tr>
<td>PLUMB-110 OSHA-CPR</td>
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<tr>
<td>PLUMB-111 Trade Mathematics</td>
<td>1.5-2.5</td>
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<tr>
<td>PLUMB-112 Water Supply Systems</td>
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<tr>
<td>PLUMB-115 Construction Management in Plumbing</td>
<td>1.5-3</td>
</tr>
<tr>
<td>PLUMB-116 Medical Gas Systems</td>
<td>1.5-2.5</td>
</tr>
</tbody>
</table>

**total minimum required units** 10
PLUMB-110  OSHA-CPR
1.5-2.5 units  LR
• Variable hours
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section. This class is the same as STMFT-110.

This course covers the regulations governed by OSHA 30 that provide and recognize safe work practices. The student will receive certification in Cardio-Pulmonary Resuscitation and First Aid.

PLUMB-111  Trade Mathematics
1.5-2.5 units  LR
• Variable hours
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section. This class is the same as STMFT-111.

This course covers the approaches to mathematical problem solving used in pipe fitting and metric conversion.

PLUMB-112  Water Supply Systems
1.5-2.5 units  LR
• Variable hours
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course presents an introduction to the principles and methods of water distribution and treatment regarding water supply systems.

PLUMB-113  Sewage Disposal
1.5-2.5 units  LR
• Variable hours
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

The course introduces the principles and methods of sewage disposal for residential and commercial buildings.

PLUMB-114  Plumbing System Service and Repair
1.5-2.5 units  LR
• Variable hours
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course presents an introduction to the planning, troubleshooting and repair of plumbing systems.

PLUMB-115  Construction Management in Plumbing
1.5-3 units  LR
• Variable hours
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

An introduction to the administrative procedures, plans and specifications, scheduling and other forms of communication in the construction field.

PLUMB-116  Medical Gas Systems
1.5-2.5 units  LR
• Variable hours
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

The requirements and standards of medical gas and vacuum system installation.

PLUMB-117  Related Science in the Piping Trades
1.5-2.5 units  LR
• Variable hours
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section. This class is the same as STMFT-117.

This course covers the scientific and mechanical principles that are basic to the work of the piping industry.

PLUMB-118  Beginning Drawing and Plan Reading for the Piping Trades
1.5-2.5 units  LR
• Variable hours
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section. This class is the same as STMFT-118.

This course covers the interpretation of drawings and sketches associated with piping installation.

PLUMB-119  Advanced Drawing in the Piping Trades
1.5-2.5 units  LR
• Variable hours
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section. This class is the same as STMFT-119.

Students in this course will interpret, coordinate and make drawings and sketches associated with piping installation.
PLUMB-120  Plumbing Tool Workshop I  
1.5-2.5 units  LR  
• Variable hours  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.  
The practical and theoretical aspects of plumbing tool processes. Students will learn the safe and proper use of the commonly used trade tools.

PLUMB-121  Plumbing Tool Workshop II  
1.5-2.5 units  LR  
• Variable hours  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.  
The practical and theoretical aspects of plumbing tool processes. Students will learn the proper use and safety of advanced trade tools.

PLUMB-122  Plumbing Code I  
1.5-2.5 units  LR  
• Variable hours  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.  
An introduction to the plumbing ordinances, articles 100-900, which provide minimum requirements and standards for public safety.

PLUMB-123  Plumbing Code II  
1.5-2.5 units  LR  
• Variable hours  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.  
An introduction to the plumbing ordinances, articles 901-1622, which provide minimum requirements and standards for public safety.

PLUMB-124  Welding for Plumbers  
1.5-2.5 units  LR  
• Variable hours  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.  
The techniques and methods of the welding process for plumbers.

PLUMB-125  Electricity for Plumbing  
1.5-2.5 units  LR  
• Variable hours  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.  
The specialized knowledge and techniques required to make electrical systems operate and function effectively.

PLUMB-126  Gas Installation in Plumbing  
1.5-2.5 units  LR  
• Variable hours  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.  
Principles and installation methods of gas piping systems.

PLUMB-127  Backflow Prevention  
1.5-2.5 units  LR  
• Variable hours  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.  
Instruction on the approved methods and appropriate devices by which backflow and cross-connection can be eliminated.

PLUMB-128  Plumbing Fixtures  
1.5-2.5 units  LR  
• Variable hours  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.  
The modern techniques and practices of plumbing fixtures and appliances.

PLUMB-129  Certification Preparation  
1.5-2.5 units  LR  
• Variable hours  
• Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.  
Preparation and review of information required for obtaining state plumbing certification.
PLUMB-130 Green Awareness
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

The course provides an overview of “green” concepts as applied to mechanical systems and high-efficiency plumbing technologies that support water conservation.

PLUMB-131 Blueprint Reading for Plumbing
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the union local responsible for the section.

This course introduces the interpretation of blueprints, specifications, and other construction documents for the plumbing industry.

PLUMB-150 Topics in Plumbing
.3-4 units SC
- Variable hours
A supplemental course in plumbing to provide a study of current concepts and problems in plumbing. Specific topics will be announced in the schedule of classes.

PLUMB-298 Independent Study
.5-3 units SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment.

PLUMB-299 Student Instructional Assistant
.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled.

POLITICAL SCIENCE – POLSC

Obed Vazquez, Dean
Social Sciences Division
Faculty Office Building, Room 136

Possible career opportunities
Political science courses offer insight into events at the local, state, national, and international level. Students develop critical thinking and other useful skills for a broad range of careers including education, public service and law. Most career options require more than two years of college study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts in political science for transfer
Students completing the program will be able to...
A. recognize political values embedded in systems of political thought.
B. describe the basic structures and procedures of American government.
C. describe the relative impact of federal, state and local governments on the inhabitants of California.
D. describe the content and origins of several world philosophies.
E. demonstrate an understanding of fundamental political concepts.
F. recognize and discuss various elements of power in political activity.

Political science courses offer insight into events at the local, state, national and international level. Students develop critical thinking and other useful skills for a broad range of careers including education, public service and law. Most career options require more than two years of college study.

The associate in arts in political science for transfer is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.
In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE), or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor's degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSU GE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalogs of the prospective transfer institution and consult a counselor.

**major requirements:**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tr>
<td>POLSC-121</td>
<td>Introduction to U.S. Government</td>
<td>3</td>
</tr>
<tr>
<td>BUS-240</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ECON-220</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON-220</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>HIST-140</td>
<td>History of Western Civilization to the Renaissance</td>
<td>3</td>
</tr>
<tr>
<td>HIST-141</td>
<td>History of Western Civilization since the Renaissance</td>
<td>3</td>
</tr>
<tr>
<td>POLSC-151</td>
<td>California Politics</td>
<td>3</td>
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**total minimum required units** 18-19

**POLSC-120  Introduction to Politics**

3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course presents an introduction to key concepts of politics, the state, and relations between the state and individual as applied to the United States political system. Comparison of the United States system with other political systems will also be discussed. C-ID POLS 150, CSU, UC

**POLSC-121  Introduction to United States Government**

3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

The course presents a survey of the American political framework and process. Students will examine the structure of the U.S. Constitution and functions of the legislative, executive and judicial branches at national, state and local levels, viewed in the context of political culture, political parties, pressure groups and citizenship. Emphasis will be placed on the impact of federal, state, and local governments in California. C-ID POLS 110, CSU, UC

**POLSC-127  Introduction to Law and Democracy**

3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course is an introduction to legal concepts in American democracy and contemporary issues: Theories of historical social injustice and movements; examination of law, social justice, democracy, government, civil rights, civil liberties, and citizenship. CSU, UC

**POLSC-151  California Politics**

3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent

This course provides investigation and analysis of selected major issues of California politics and government including: the roles and responsibilities of governmental agencies, the importance of local political entities, and evaluation of policy choices. CSU, UC

**POLSC-155  Topics in Political Science**

.3-4 units  SC
- Variable hours

A supplemental course in political science to provide a study of current concepts and problems in political science and related substantive areas. Specific topics will be announced in the schedule of classes. CSU
POLSC-220 Comparative Politics
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents a comparative analysis of the political systems of selected foreign states. The origins and nature of politics, philosophies, and cultures and their expression in political institutions and processes are investigated. C-ID POLS 130, CSU, UC

POLSC-240 Political Theory
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
A survey of selected political theorists and concepts and/or issues from Plato to the present. Includes analysis of theoretical approaches used to explain, instruct, and justify the distribution of political power in societies. C-ID POLS 120, CSU, UC

POLSC-250 International Relations
3 units SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course is an introduction to various aspects of international relations and politics. Topics include sovereignty, the nation-state and international politics, the nature of the global community, international law, world economies, the United Nations and other international organizations and contemporary world problems. C-ID POLS 140, CSU, UC

POLSC-252 Model United Nations
3 units LR
• 36 hours lecture/54 hours laboratory per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course introduces students to the theory and practice of international diplomacy and intergovernmental organizations (IGOs.) Focus is placed on history, structures and functions of the United Nations (UN), international bargaining and diplomacy, conflict resolution, and parliamentary procedures. Model UN will examine United States foreign and domestic policies related to the UN. Students will organize meetings modeled after the UN General Assembly, the Security Council and other organs of the UN as well as its specialized agencies and major IGOs. CSU

POLSC-299 Student Instructional Assistant
.5-3 units SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

PORT-120 First Term Portuguese
5 units SC
• 90 hours lecture per term
• Note: This course is equivalent to two years of high school study.
This is a basic course in understanding, speaking, reading, and writing Portuguese. It offers a balanced approach to language and culture. Basic communicative functions and structures are introduced, as well as basic exploration of the culture and countries of the Portuguese-speaking world. CSU, UC

PORT-121 Second Term Portuguese
5 units SC
• 90 hours lecture per term
• Prerequisite: PORT-120 or two years of high school study or equivalent
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.
This is the second term Portuguese language course. It addresses the understanding, speaking, reading and writing of the Portuguese language. The course is a continued study of basic communicative structures with an introduction to communicative functions. Students will learn the preterit and imperfect tenses, compound tenses in the indicative mood, future and conditional tenses, and present subjunctive, as well as expand their vocabulary. The course includes a continued examination of the culture of the Portuguese-speaking countries. CSU, UC
Psychology

**PSYCHOLOGY – PSYCH**

Obed Vazquez, Dean
Social Sciences Division
Faculty Office Building, Room 136

**Possible career opportunities**

Psychology students will find classes related to helping them understand, predict, and deal with their own behavior and that of others. Careers include psychotherapist, school psychologist, college professor, researcher, counselor and administrator. Most career options require more than two years of college study.

**Program-level student learning outcomes**

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at [www.dvc.edu/slo](http://www.dvc.edu/slo).

**Associate in arts in psychology for transfer**

Students completing the program will be able to:

A. identify the major theoretical orientations in psychology and demonstrate knowledge of basic psychological concepts regarding behavior and mental processes.

B. demonstrate knowledge of research methods; ethical considerations in conducting research, and effective use of the American Psychological Association (APA) style in presenting information.

C. utilize critical thinking skills to analyze, evaluate, and make decisions concerning complex contemporary issues in psychology.

D. recognize the complexity of social, cultural, and international diversity.

E. apply psychological principles to the development of interpersonal, occupational, and social skills, and life-long personal growth.

F. demonstrate understanding of major theories, concepts, and research findings in selected content areas of psychology, such as lifespan development, personality and social psychology, neuroscience, and abnormal psychology.

G. correctly apply statistical concepts to organize and understand data from psychological research.

H. demonstrate an understanding of biological processes underlying behavior and experience.

The associate in arts in psychology for transfer major at Diablo Valley College (DVC) provides students with an introduction to psychology as the scientific study of thought, feeling, and behavior, and a helping profession dedicated to solving human problems. The associate degree curriculum meets lower division requirements for transfer to the CSU system baccalaureate degree programs in psychology and fulfills lower division general education requirements for transfer to the CSU system.

Psychology includes a variety of sub-fields, including clinical, counseling, developmental, forensic, social, cognitive, biological, and personality psychology. Most career options require more than two years of college study. The associate in arts in psychology for transfer degree provides preparation for transfer to psychology programs at baccalaureate-granting institutions. Transferring, completion of a bachelor's degree, and graduate studies in psychology can lead to careers as psychotherapists, college professors, scientific researchers, administrators, and business consultants.

The associate in arts in psychology for transfer is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

- Complete 60 semester CSU-transferable units.
- Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- Complete a minimum of 18 semester units in the major.
- Obtain a minimum grade point average (GPA) of 2.0.
- Earn a grade of “C” or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate's degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

**major requirements:**

- PSYCH-101 Introduction to Psychology ................................................. 3
- PSYCH-215 Introduction to Research Methods in Psychology .................. 3

**at least 3 units from:**

- BUS-240 Business Statistics.................................................. 3
- MATH-142 Elementary Statistics with Probability .................... 4

**complete at least 3 units from:**

- BIOSC-102 Fundamentals of Biological Science with Laboratory ............ 4
- BIOSC-117 Human Biology with Laboratory .................................. 4
- PSYCH-130 Introduction to Biological Psychology ....................... 3
complete at least 3 units from:
PSYCH-145 Critical Thinking in Psychology 3
PSYCH-200 Life Span Development 3
PSYCH-225 Social Psychology 3

complete at least 3 units from:
PSYCH-122 Psychology in Modern Life 3
PSYCH-140 Psychology of African-Americans in a Multicultural Society 3
PSYCH-141 Psychology of Latinos/Chicanos in the U.S. 3
PSYCH-160 Psychology of Women 3
PSYCH-190 Psychology of Adolescence 3
PSYCH-220 Psychology of Personality: Personal, Social, Cultural Differences 3
PSYCH-230 Abnormal Psychology 3
PSYCH-240 Transpersonal Psychology 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH-101</td>
<td>Introduction to Psychology</td>
<td>3</td>
<td>SC</td>
<td>This course is a study of the major theories, methods and concepts of modern psychology. The orientation of the course is the scientific study of behavior and mental processes, and covers such areas as: the history and systems of psychology, the biological foundations of behavior, perception, states of consciousness, learning, memory, motivation, emotion, human development, personality, stress and health, abnormal psychology, therapies, social psychology, research findings, and applied psychology. Recommended: Eligibility for ENGL-122 or equivalent.</td>
</tr>
<tr>
<td>PSYCH-122</td>
<td>Psychology in Modern Life</td>
<td>3</td>
<td>SC</td>
<td>This course examines the psychological, physiological, and cultural factors involved in personality development, and interpersonal relationships. The relevance of psychology to social processes is also examined. This course is designed with an applied focus for students interested in how psychology is used in everyday life and is related to other social sciences. The course surveys different psychological perspectives and theoretical foundations and how these are applied across a person's life taking into account the influence of factors such as culture, gender, ethnicity, historical cohort, and socio-economic status. Recommended: Eligibility for ENGL-122 or equivalent.</td>
</tr>
<tr>
<td>PSYCH-130</td>
<td>Introduction to Biological Psychology</td>
<td>3</td>
<td>SC</td>
<td>This course explores the biological bases of behavior, emotions, and psychological processes. Brain-behavior relationships underlying psychological processes such as sensation, perception, learning, memory, emotions, and psychological disorders will be examined. Historical contributions, prominent theories and models, current research principles and ethical standards in research will be addressed. Recommended: Eligibility for ENGL-122 or equivalent.</td>
</tr>
<tr>
<td>PSYCH-140</td>
<td>Psychology of African-Americans in a Multicultural Society</td>
<td>3</td>
<td>SC</td>
<td>This course is a study of the behavioral, physiological, and psychological experiences of African-Americans in the multicultural U.S. Topics chosen reflect the reciprocal impacts among majority European-American cultures and historical waves of immigration of various different minority groups, using African-Americans as a historical starting place including assimilation, resistance, and acculturation. Particular attention will be paid to cultural, social, and historical contributions of African-Americans, and how they have been viewed in relation to Latino/as, Native Americans, and Asian-Pacific Americans over time. Recommended: Eligibility for ENGL-122 or equivalent.</td>
</tr>
<tr>
<td>PSYCH-141</td>
<td>Psychology of Latinos/Chicanos in the U.S.</td>
<td>3</td>
<td>SC</td>
<td>This course is a study of the behavioral, physiological, and psychological experiences of a variety of different groups within the Latino/Chicano cultural collective. Topics chosen reflect the reciprocal impacts among majority European American culture and historical waves of immigration of various different Latino groups, and other minority groups in the U.S., including assimilation, resistance, and acculturation. Particular attention will be paid to cultural, social, and historical contributions of groups within the Latino collective, and how Latino groups have been viewed in relation to African Americans, Native Americans, and Asian-Pacific Americans over time. Recommended: Eligibility for ENGL-122 or equivalent.</td>
</tr>
</tbody>
</table>
PSYCH-145  Critical Thinking in Psychology
3 units  SC
• 54 hours lecture per term
• Prerequisite: ENGL-122 or equivalent
This course helps students develop critical thinking and writing skills necessary to analyze, evaluate, and make decisions concerning complex contemporary issues in psychology. Topics include the principles of inductive and deductive reasoning, the philosophy of science, strengths and weaknesses of the scientific method, distinguishing knowledge from beliefs, and the examination of paradigms in psychology. The course integrates critical thinking and writing skills with effective written expression. CSU, UC

PSYCH-155  Topics in Psychology
.3-4 units  SC
• Variable hours
A supplemental course in psychology to provide a study of current concepts and problems in psychology and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

PSYCH-160  Psychology of Women
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course is an examination of various factors in the development of gender identity, including personality, social processes, biology, and culture. Topics include interpersonal relations, communication styles, and psychological similarities and differences between males and females. CSU, UC

PSYCH-190  Psychology of Adolescence
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course presents a survey of adolescent development and the psychological challenges faced by adolescents. Topics include adolescent values and attitudes; adolescent self-concept, self-esteem and identity; adolescent sex-role socialization; parent and family influence on adolescent socialization and peer group influence on adolescent development. CSU, UC

PSYCH-200  Life Span Development
3 units  LR
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course examines the developmental changes and sociocultural events that take place during an individual's life span from conception to death. A major goal of this course is to introduce students to the psychological characteristics, personal/social developmental opportunities for each of life's age periods. A second goal of this course is to expose students to classic and contemporary theory and research in the area of human development. Emphasis will be placed on life cycle theories, the role of heredity and environment, and the role of individual differences. Life stages will be viewed in terms of a variety of theoretical frameworks which address the following domains of human development: physical, cognitive, social and personality. C-ID PSY 180, CSU, UC

PSYCH-215  Introduction to Research Methods in Psychology
3 units  SC
• 54 hours lecture per term
• Prerequisite: PSYCH-101 and BUS-240 or MATH-142 or equivalents
• Recommended: Eligibility for ENGL-122 or equivalent
This course is an introduction to the methods psychologists use to understand human behavior. The course examines the scientific method, operationalization of variables, inductive and deductive reasoning, experimental and non-experimental designs (including descriptive methods), experimental instrumentation, group and single-subject designs, and research ethics. Research in a variety of subfields within psychology will be utilized to demonstrate research design and the collection, analysis, interpretation, and reporting of research data. Students will perform a literature review, design an original research study, and prepare research reports using American Psychological Association (APA) style report writing. C-ID PSY 200, CSU, UC

PSYCH-220  Psychology of Personality: Personal, Social, Cultural Differences
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course examines the dynamics of personality development, adjustment, and growth. Particular emphasis is placed on contrasting the ideas and methodologies of various schools of psychology, including Western and non-Western views. CSU, UC
PSYCH-225 Social Psychology
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
Social psychology is the scientific study of the way people think, feel, and behave in social situations. This course is an introduction to the perspectives, research methods, and empirical findings in social psychology. Topics include how people influence each other, the power of social situations, developing critical and integrative ways of thinking about theory and research, and the application of social psychological theories to everyday life experiences. C-ID PSY 170, CSU, UC

PSYCH-230 Abnormal Psychology
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course introduces the scientific study of the symptoms, causes, treatments, and prevention of psychological disorders. Multiple theoretical perspectives are used to examine the biological, psychological, and sociocultural factors creating abnormality. The course examines the Diagnostic and Statistical Manual of Mental Disorders (DSM) classification system, cultural and gender differences in abnormality, current research and ethical issues, and case illustrations of behavioral disorders. C-ID PSY 120, CSU, UC

PSYCH-240 Transpersonal Psychology
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course examines the psychological study of consciousness, mind-body relationship, and the role of spiritual inquiry in human transformation. Students will learn about ultimate human capacities such as peak and transcendent experiences, inspired creativity, altruistic ideals, and peak performance. Transpersonal psychology suggests such capacities and experiences may be latent and can be developed. In exploring this theme, various approaches from ancient spiritual to modern scientific are critically examined. CSU, UC

PSYCH-299 Student Instructional Assistant
.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled, CSU

RESPIRATORY THERAPY – RT

Associate in science degree
Respiratory therapy

Associate in science degree - respiratory therapy
The respiratory therapy (RT) program is offered in collaboration with Ohlone College in Newark. Students complete general education courses at DVC, laboratory and clinical courses at Ohlone College, and have supervised clinical practice at local hospitals.

This program prepares students to be respiratory therapists in one of the fastest growing allied health professions in the nation. Therapists are involved in the diagnosis, treatment, management and care of patients with deficiencies and abnormalities associated with the cardio respiratory system, in both hospital and home environments. Completion of this program makes graduates eligible for the California state license examination of the National Board for Respiratory Care (NBRC).

By completing the general education coursework at DVC and the RT coursework at Ohlone, students will receive an associate in science degree from Ohlone College. Students must maintain a minimum of a “C” grade or higher in all program courses. For applications and information, contact the Ohlone College RT program director at www.ohlone.edu/instr/rt. All applicants are required to attend a Pre-Application Orientation. Dates are posted annually on the Ohlone website.
### Respiratory Therapy

**plus at least 4 units from:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM-108</td>
<td>Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM-120</td>
<td>General College Chemistry I</td>
<td>5</td>
</tr>
</tbody>
</table>

**total minimum units of program prerequisites** 30

**supporting course:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH-200</td>
<td>Life Span Development</td>
<td>3</td>
</tr>
</tbody>
</table>

**total units of supporting course** 3

**Prerequisites and support course may be “in progress” at the time of application. These courses must be completed no later than the end of the spring term during the year of application.**

**recommended course before entering the program:**

One of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM-120</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>COMM-128</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

**major requirements:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH 151*</td>
<td>Applied Clinical Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>RT-101*</td>
<td>Principles of Respiratory Therapy I</td>
<td>3</td>
</tr>
<tr>
<td>RT 101L*</td>
<td>Beginning Clinical Practice</td>
<td>1</td>
</tr>
<tr>
<td>RT 102*</td>
<td>Beginning Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>RT 103*</td>
<td>Basic Patient Care</td>
<td>0.5</td>
</tr>
<tr>
<td>RT 104A*</td>
<td>Principles of Respiratory Therapy II</td>
<td>3</td>
</tr>
<tr>
<td>RT 104B*</td>
<td>Principles of Respiratory Therapy III</td>
<td>3</td>
</tr>
<tr>
<td>RT 105A*</td>
<td>Intermediate Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>RT 105B*</td>
<td>Intermediate Laboratory II</td>
<td>0.5</td>
</tr>
<tr>
<td>RT 107*</td>
<td>Intermediate Clinical Practice</td>
<td>4</td>
</tr>
<tr>
<td>RT 108*</td>
<td>Basic Principles of Respiratory Pathophysiology</td>
<td>1</td>
</tr>
<tr>
<td>RT 130A*</td>
<td>Advanced Respiratory Therapy I</td>
<td>2.5</td>
</tr>
<tr>
<td>RT 130B*</td>
<td>Advanced Respiratory Therapy II</td>
<td>1.5</td>
</tr>
<tr>
<td>RT 130L*</td>
<td>Advanced Clinical Practice</td>
<td>2</td>
</tr>
<tr>
<td>RT 131A*</td>
<td>Principles of Mechanical Ventilation I</td>
<td>2.5</td>
</tr>
<tr>
<td>RT 131B*</td>
<td>Principles of Mechanical Ventilation II</td>
<td>2.5</td>
</tr>
<tr>
<td>RT 132*</td>
<td>Advanced Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>RT 133*</td>
<td>Mechanical Ventilation Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>RT 134*</td>
<td>Neonatal and Pediatric Respiratory Care</td>
<td>1</td>
</tr>
<tr>
<td>RT 134L*</td>
<td>Clinical Practicum in Neonatal and Pediatric Respiratory Care</td>
<td>1.5</td>
</tr>
<tr>
<td>RT 135*</td>
<td>Computer Simulations for Respiratory Care</td>
<td>0.5</td>
</tr>
<tr>
<td>RT 136*</td>
<td>Critical Care Clinical Practice</td>
<td>3.5</td>
</tr>
<tr>
<td>RT 137*</td>
<td>Home Respiratory Care and Pulmonary Rehabilitation</td>
<td>0.5</td>
</tr>
<tr>
<td>RT 138*</td>
<td>Special Rotations in Respiratory Care</td>
<td>0.5</td>
</tr>
<tr>
<td>RT 139*</td>
<td>Pulmonary Function Testing</td>
<td>1</td>
</tr>
<tr>
<td>RT 139L*</td>
<td>Clinical Practice in Pulmonary Function Testing</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**total minimum required units** 44

*These are Ohlone College courses.

In addition to the courses above, students must complete general education:

**Ohlone**

- **Area III, Fine Arts/Humanities**
  - 3 units required
  - One course from:
    - ADS-155; ADJUS-130; ANTHR-120,135; COMM-125; CULN-228; DRAMA-142; ECE-144; ENGL-162, 163, 164, 166, 167, 168, 170, 173, 177, 190, 225, 262; FTVE-210, 260; GEOG-135; HIST-124, 125, 126, 127, 128, 129, 130, 134, 135, 136, 140, 141, 151, 161, 170, 171; HUMAN-115, 116; MUSIC-112, 114, 115, 116; PHILO-220; PSYCH-140, 141, 160, 220; SOCIO-124, 125, 131, 135; SOCSOC-120, 220

- **Area V, Physical Education/Wellness**
  - 1 unit required
  - KNACT and KNDAN, 1 unit or HSCI-124, 126, 140, 164, 170

**DVC**

- **Area III, Arts and Humanities**
  - One course from:
    - LS-121 required
RUSSIAN – RUSS

Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

Possible career opportunities
The study of Russian can open up opportunities in communications, foreign trade and banking, transportation, government, the Foreign Service, tourism, library services, teaching, professional translating, journalism, and all levels of education, including university teaching. Most foreign language careers require more than two years of study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Certificate of achievement
Russian

Students completing the program will be able to...
A. comprehend a spoken dialogue in the target language.
B. identify the present, past and future tenses in a written paragraph.
C. interpret cultural behavior.

This certificate of achievement was created to give students the opportunity to show potential employers in this country and in other countries that the student has completed a certain number of courses in Russian and prepares students with an intermediate to advanced knowledge of Russian and familiarizes them with the culture of Russia and other Russian-speaking countries.

This certificate of achievement provides students, prospective employers and others with documented evidence of persistence and academic accomplishment in the language. The certificate requires completion of a minimum of 15 units from the following list of courses. Students may not take a credit/no credit option for required courses and each course must be completed with a “C” grade or higher.

complete at least 15 units from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUSS-120</td>
<td>5</td>
</tr>
<tr>
<td>RUSS-121</td>
<td>5</td>
</tr>
<tr>
<td>RUSS-220</td>
<td>5</td>
</tr>
<tr>
<td>RUSS-221</td>
<td>5</td>
</tr>
</tbody>
</table>

total minimum required units 15

RUSS-120  First Term Russian
5 units  SC
- 90 hours lecture per term
- Note: This course is equivalent to two years of high school study.

This is a basic course in understanding, speaking, reading and writing Russian. It offers a balanced approach to the language and culture. Basic communicative functions and structures are introduced as well as a basic exploration of the culture of the Russian-speaking countries. CSU, UC

RUSS-121  Second Term Russian
5 units  SC
- 90 hours lecture per term
- Prerequisite: RUSS-120 or two years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is the second course in a sequence of Russian language courses. It addresses the understanding, speaking, reading and writing of the Russian language. The course continues to expand vocabulary, communicative functions, and structures. The course will continue the examination of the cultures of the Russian-speaking countries. CSU, UC

RUSS-150  Topics in Russian
.3-4 units  SC
- Variable hours

A supplemental course in Russian to provide a study of current concepts and problems in Russian and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

RUSS-220  Third Term Russian
5 units  SC
- 90 hours lecture per term
- Prerequisite: RUSS-121 or three years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is a third term course which delves more extensively into the declensions of nouns and the coordination of various case endings including the accusative and genitive plurals and the instrumental cases. Reflexive, imperfective and perfective verbs are covered and reading and writing continues at an increasing level of complexity. There is continued study and interpretation of Russian and Soviet culture through literature and selected articles. CSU, UC
RUSS-221  Fourth Term Russian
5 units  SC
• 90 hours lecture per term
• Prerequisite: RUSS-220 or four years of high school study or equivalent
• Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is a fourth semester course which refines understanding, speaking, reading, and writing Russian and a continuation of the study of Russian literature and history. The course expands on the study and interpretation of Russian and Soviet culture, with emphasis on current events. Verbs which express requests or questions, declensions of last names and additional uses of the instrumental case will be covered. CSU, UC

RUSS-299  Student Instructional Assistant
.5-3 units  SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

SIGN LANGUAGE – SIGN

Obed Vazquez, Dean
Social Sciences Division
Faculty Office Building, 138

Possible career opportunities
Sign language will help to prepare the student to communicate and work with deaf and hard of hearing people. There is a need for skilled, qualified sign language interpreters in educational and social service agencies. Teachers, human services providers, or independent living attendants also sometimes use sign language in their work. Some career options require more than two years of college study.

SIGN-281  American Sign Language (ASL) II
3 units  SC
• 54 hours lecture per term
• Prerequisite: SIGN-280 or equivalent

This course builds on basic principles and vocabulary introduced in SIGN-280. Students will further develop skills including expressive and receptive sign, the manual alphabet, facial expression, and body gestures. An emphasis will be placed on conversational skills in functional situations, continued vocabulary and grammatical expression development, and the knowledge of deaf culture and community. CSU, UC

SIGN-282  American Sign Language (ASL) III
3 units  SC
• 54 hours lecture per term
• Prerequisite: SIGN-281 or equivalent

This course expands vocabulary and grammatical skills, both receptive and expressive, using ASL I and II as a base. Students will further develop conversational skills in functional situations, and lead to an appreciation of the deaf culture and history. CSU, UC

SIGN-283  American Sign Language (ASL) IV
3 units  SC
• 54 hours lecture per term
• Prerequisite: SIGN-282 or equivalent

This course is an advanced study of sign language expanding vocabulary and grammatical skills, both receptive and expressive. It will further develop conversational skills in functional settings, and lead to an appreciation of the deaf culture and history. CSU, UC

SIGN-299  Student Instructional Assistant
.5-3 units  SC
• Variable Hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

SIGN-280  American Sign Language (ASL) I
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent

The course provides an introduction to American Sign Language including expressive and receptive sign, the manual alphabet, facial expression, and body gestures with emphasis on conversational skills in functional situations. CSU, UC
Social science fields are many and varied, as are the associated career opportunities. Careers with all levels of government, research and teaching are all possibilities. Most career options require more than two years of college study.

SOCSC-110  The American Social Experience
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course is an interdisciplinary examination of the various interpretations developed within the social sciences of the roles of individuals and their experiences in American society. The course considers the roles of social institutions, federal, state, and local governments, and surveys the ideas and values that played a part in shaping America’s cultural image. The course surveys the significant contributions of Asian Americans, Latinos, African Americans, Native Americans, and women in shaping the evolution of the concept of American individualism. It also examines critical events in the shaping of social, political, and economic identity among national and gender groups in American society and culture. CSU, UC

SOCSC-111  Money, Power and Politics in the United States
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course is a multidisciplinary, integrative study of the concepts of democracy and the historical, political and economic processes through which democracy has arisen in the United States. The United State Constitution and state and local government in California will be emphasized. Particular attention is given to the contributions to American democracy by diverse social groups and the international context of American political and economic life. CSU, UC

SOCSC-120  Women and Social Change in the United States: 1890-Present
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course presents an overview of the history of U.S. women from the Progressive Era (1890) to the present, emphasizing the commonalities of women’s experiences. It examines differences among women based on their ethnic identification, social class and region, including the interaction between and contributions of Native American, African American, Asian American and Latina women. Topics of emphasis will include political, economic and cultural change in the U.S., change fostered by women, and the transformed roles of women in the family within the continuity of the United States experience. Students will analyze the political philosophies of the framers of the U.S. Constitution and the rights and obligations of citizens under the U.S. Constitution with an emphasis on gender issues. CSU, UC

SOCSC-123  American Popular Culture
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course is an interdisciplinary examination of popular culture’s changing nature in American society. Looking through the lens of popular culture, this course will examine social and political institutions, such as federal and California state government, and various values that shape American popular culture. The course considers the significant contributions of Asian American, Latino, African American, Native American, and Jewish communities in shaping the evolution of American popular culture, and considers the importance of women as both producers and consumers of popular culture. CSU, UC

SOCSC-155  Topics in Social Science
.3-.4 units  SC
- Variable hours
A supplemental course in the social sciences to provide a study of current concepts and problems in social sciences and related substantive areas. Specific topics will be announced in the schedule of classes. CSU

SOCSC-220  Women in United States Society
3 units  SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course is a multicultural and interdisciplinary examination of women’s changing roles in U.S. society. The social institutions and values that shape those roles, including federal, state, and local governments, as well as the U.S. and California Constitutions will be explored. Significant events and developments that shape the social, political, and economic status of women, as well as the importance of race/ethnicity, class, region, and sexual orientation in differentiating the experiences and opportunities for women will also be presented. CSU, UC
SOCSC-298 Independent Study
.5-3 units SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

SOCSC-299 Student Instructional Assistant
.5-3 units SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

SOCIOLGY – SOCIO
Obed Vazquez, Dean
Social Sciences Division
Faculty Office Building, Room 136

Possible career opportunities
Sociology provides students with career opportunities including criminologist, employment counselor, interviewer, researcher, social worker, and urban planner. Most career options require more than two years of college study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts in sociology for transfer
Students completing the program will be able to...
A. define and apply sociological concepts.
B. identify, explain and provide possible solutions to social problems.
C. identify and apply the major theoretical paradigms, functionalist, conflict and interactionist perspectives to analyze social and cultural issues.
D. demonstrate knowledge of research methods and ethical considerations in conducting research.
E. utilize critical thinking skills to analyze and evaluate complex social issues.
F. utilize data to study social phenomena.
G. make connections between individuals’ lives, their biographies and their social context.

The sociology major is a valuable liberal arts major for students planning careers in social research, criminology, demography, or social psychology, but also for those pursuing a course of study in public administration, gerontology, education, social work and market research. Sociology provides a useful background for those planning to enter law, business, marketing, medicine, community planning and services, architecture, and politics. In many professional programs in human services, courses in sociology are part of the required training. Sociologists with graduate degrees may teach at the high school, college or graduate levels. They may also become research sociologists in both the public and private sectors and work in areas of public policy, the law and international studies. Applied sociologists may work with social service agencies and community programs on behalf of others, including underrepresented or neglected populations.

Sociology at Diablo Valley College offers a broad range of courses including the urban environment, marriage and families, minority and race relations, social problems, social research and gender studies.

The associate in arts in sociology for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:
• Complete 60 semester CSU-transferable units.
• Complete the California State University-General Education pattern (CSU GE); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
• Complete a minimum of 18 semester units in the major.
• Obtain of a minimum grade point average (GPA) of 2.0.
• Earn a grade of “C” or higher in all courses required for the major.
Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60 unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

major requirements:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI-120 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>plus at least 6 units from:</td>
<td></td>
</tr>
<tr>
<td>BUS-240 Business Statistics with Probability</td>
<td>3</td>
</tr>
<tr>
<td>MATH-142 Elementary Statistics with Probability</td>
<td>4</td>
</tr>
<tr>
<td>SOCI-121 Introduction to Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>SOCI-123 Introduction to Social Research</td>
<td>3</td>
</tr>
<tr>
<td>plus at least 6 units from any course not used above, or:</td>
<td></td>
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<tr>
<td>PSYCH-225 Social Psychology</td>
<td>3</td>
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<tr>
<td>SOCI-122 Critical Thinking About Social and Cultural Issues</td>
<td>3</td>
</tr>
<tr>
<td>SOCI-124 Gender, Culture and Society</td>
<td>3</td>
</tr>
<tr>
<td>SOCI-125 Introduction to Marriage and Family</td>
<td>3</td>
</tr>
<tr>
<td>SOCI-125 Introduction to Race and Ethnicity</td>
<td>3</td>
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<td>plus at least 3 units from any course not used above, or:</td>
<td></td>
</tr>
<tr>
<td>SOCI-131 The Urban Community</td>
<td>3</td>
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<tr>
<td>SOCSC-120 Women and Social Change in the United States 1890-Present</td>
<td>3</td>
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<td>total minimum required units</td>
<td>18</td>
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</tbody>
</table>

**SOCI-120 Introduction to Sociology**  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course provides an introduction to the theory and scientific methodology of sociology; a survey of the interactions, interrelationships, and processes of society as an organized structure. Sociology’s substantive areas including methodology, socialization, culture, social stratification, race, and ethnic minorities, gender and sexual orientation will be discussed. Institutional analysis beginning with the family, religion, and education is introduced. C-ID SOCI 110, CSU, UC

**SOCI-121 Introduction to Social Problems**  
3 units  SC  
- 54 hours lecture per term  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course is a survey of perspectives on major social problems, primarily in the urban, industrial settings. Includes sources, consequences of and means of coping with a variety of social problems. The scientific methodology required for accurate analysis is emphasized. Topics will be selected from social problems such as aging, health care, mental illness, environmental issues, labor force conditions, gender and sexuality, poverty, crimes, juvenile delinquency, suicide, addiction, abuse, migration and relations with minority groups, or membership in deviant subcultures. C-ID SOCI 115, CSU, UC

**SOCI-122 Critical Thinking About Social and Cultural Issues**  
3 units  SC  
- 54 hours lecture per term  
- Prerequisite: ENGL-122 or equivalent  
Critical reasoning in sociology is a process of questioning, analyzing and evaluating oral and written ideas, concepts, and interpretations of the political, economic and social issues and patterns found in human societies. This process will include an introduction to the principles of logic, the structure of language, the scientific method, and prevailing theoretical models in sociology. Specific writing skills will be developed through a series of increasingly complex analytical essays and through instruction in metaphor, analogy, comparing and contrasting, the nature of evidence, as well as essay structure and expression. The goal is for students to learn how to identify sociological viewpoints, to gather and analyze sociological information, to recognize sociological relationships and patterns, and to see the relevancy of sociological insights and theories as a background for understanding current events and issues. CSU, UC

**SOCI-123 Introduction to Social Research**  
3 units  SC  
- 54 hours lecture per term  
- Prerequisite: SOCI-120 or equivalent  
- Recommended: Eligibility for ENGL-122 or equivalent  
This course is a study of the various social research methods and a review of problems in assessing data relating to social life. Topics to be covered include: posing a sociological problem, data-gathering techniques, sampling, measurement, and establishing relationships among data. This class allows students to become involved in the process of conducting survey research and to participate in the use of other social research techniques. C-ID SOCI 120, CSU, UC
SOCIO-124  Gender, Culture, and Society
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
A multidimensional examination of the socialization of sex roles in United States society and other cultures, including the mechanisms by which gender roles develop and the social consequences for society. The course examines the social and cultural processes and institutional arrangements that give meaning to being a woman and a man in gendered society. C-ID SOCI 140, CSU, UC

SOCIO-125  Introduction to Marriage and Family
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
An examination of basic issues concerning marriage, family and kinship in African American, Euro American, Hispanic, Asian and Native American families. Emphasis on cross-cultural and cross-societal comparisons, kinship groups, the nature of human marriage, relationship of the family to other social institutions, child rearing, plural marriages, family politics, and speculations concerning the future of the family. C-ID SOCI 130, CSU, UC

SOCIO-131  The Urban Community
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course examines current and historical social change in cities and suburbs through the experience of African Americans, Latinos, Asian Americans, Native Americans and European Americans. Challenges faced by multicultural communities, neighborhoods and suburbs, and programs and strategies that are designed to meet these challenges will be covered. CSU, UC

SOCIO-135  Introduction to Race and Ethnicity
3 units  SC
• 54 hours lecture per term
• Recommended: Eligibility for ENGL-122 or equivalent
This course is a sociological analysis of ethnic cultures in the United States. Topics include political, economic, religious, judicial, and familial organization of ethnic communities, the effects of the dominant society on these institutions and recent socio-political movements. C-ID SOCI 150, CSU, UC

SOCIO-155  Topics in Sociology
.3-4 units  SC
• Variable hours
A supplemental course in sociology to provide a study of current concepts and problems in sociology and related substantive areas. Specific topics will be announced in the schedule of classes. CSU

SOCIO-298  Independent Study
.5-3 units  SC
• Variable hours
• Note: Submission of acceptable educational contract to department and Instruction Office is required.
This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU

SOCIO-299  Student Instructional Assistant
.5-3 units  SC
• Variable hours
• Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.
Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU

SPANISH – SPAN
Toni Fannin, Interim Dean
Applied and Fine Arts Division
Business and Foreign Language Building, Room 204

Possible career opportunities
The study of Spanish can open up opportunities in communications, foreign trade and banking, transportation, government, the Foreign Service, tourism, library services, teaching, professional translating, journalism, and all levels of education, including university teaching. Most foreign language careers require more than two years of study.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.
Associate in arts degree
Spanish

Students completing the program will be able to...
A. comprehend a spoken dialogue in the target language.
B. identify the present, past and future tenses in a written paragraph.
C. interpret cultural behavior.

The associate in arts degree in Spanish at DVC will provide students with skills in understanding, speaking, reading and writing Spanish. It also gives students a greater understanding of Spanish culture and civilization and will prepare them for a broad range of international and domestic career opportunities and professions. The degree will also provide students the opportunity to transfer to UC, CSU and other four year colleges and universities to earn a bachelor’s degree.

The DVC Spanish major is intended for transfer. Students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to baccalaureate-granting institutions of their choice are met. Students who intend to transfer are advised to select General Education Option 2 (IGETC) or Option 3 (CSU GE). Option 1 (DVC General Education) is appropriate for those students who do not intend to transfer. Students may not take a pass/no pass option for major courses and each of the major requirements must be completed with a “C” grade or higher. Certain courses may satisfy both major and general education requirements; however, the units are counted only once.

To earn an associate in arts degree in Spanish, students must complete 20 units from the list of major requirements, which will provide students with the essential grammar of the language, culture and basic literature of the Spanish speaking world. Students with no previous knowledge of Spanish when entering DVC will take the first four courses in the list for a total of 20 units. If students enter the program with previous knowledge of Spanish, they may start at the second term level and take fifth and sixth terms to achieve a total of 21 units.

complete at least 20 units from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>SPAN-120</td>
<td>First Term Spanish</td>
</tr>
<tr>
<td>SPAN-121</td>
<td>Second Term Spanish</td>
</tr>
<tr>
<td>SPAN-220</td>
<td>Third Term Spanish</td>
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<tr>
<td>SPAN-221</td>
<td>Fourth Term Spanish</td>
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<tr>
<td>SPAN-230</td>
<td>Fifth Term Spanish</td>
</tr>
<tr>
<td>SPAN-231</td>
<td>Sixth Term Spanish</td>
</tr>
</tbody>
</table>

total minimum required units | 20

Certificate of achievement
Spanish

Students completing the program will be able to...
A. comprehend a spoken dialogue in the target language.
B. identify the present, past and future tenses in a written paragraph.
C. interpret cultural behavior.

The study of Spanish can open up opportunities in communications, foreign trade and banking, transportation, government, the Foreign Service, tourism, library services, teaching, professional translating, journalism, and all levels of education, including university teaching. Most foreign language careers require more than two years of study.

The associate in arts in Spanish for transfer is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major.

In order to earn the degree, students must:

• Complete 60 semester CSU-transferable units.
• Complete the California State University-General Education-Breadth pattern (CSU GE-Breadth); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
• Complete a minimum of 18 semester units in the major.
• Obtain a minimum grade point average (GPA) of 2.0.
• Earn a grade of C or higher in all courses required for the major.

Students transferring to a CSU campus that accepts the degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Students must complete each course used to meet a major requirement with a “C” grade or higher. Some courses in the major satisfy both major and CSUGE/IGETC general education requirements; however, the units are only counted once toward the 60-unit requirement for an associate’s degree. Some variations in requirements may exist at certain four-year institutions; therefore, students who intend to transfer are advised to refer to the catalog of the prospective transfer institution and consult a counselor.

major requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
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<tr>
<td>SPAN-220</td>
<td>Third Term Spanish</td>
</tr>
<tr>
<td>SPAN-221</td>
<td>Fourth Term Spanish</td>
</tr>
<tr>
<td>SPAN-230</td>
<td>Fifth Term Spanish</td>
</tr>
</tbody>
</table>

total minimum required units | 23
This certificate of achievement was created to give students the opportunity to show potential employers in this country and in other countries that the student has completed a certain number of courses in Spanish and prepares students with an intermediate to advanced knowledge of Spanish and familiarizes them with the culture of Spain and Latin America.

This certificate of achievement provides students, prospective employers and others with documented evidence of persistence and academic accomplishment in the language. The certificate requires completion of at least 13 units from one of the following lists of courses. Students may take a credit/no credit option for required courses and each course must be completed with a “C” grade or higher.

<table>
<thead>
<tr>
<th>List A</th>
<th>units</th>
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<tbody>
<tr>
<td>SPAN-120</td>
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<td>SPAN-121</td>
<td>5</td>
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<tr>
<td>SPAN-220</td>
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<tr>
<td>SPAN-221</td>
<td>5</td>
</tr>
<tr>
<td>SPAN-230</td>
<td>3</td>
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<tr>
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</table>

<table>
<thead>
<tr>
<th>List B</th>
<th>units</th>
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</thead>
<tbody>
<tr>
<td>SPAN-121</td>
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<tr>
<td>SPAN-221</td>
<td>5</td>
</tr>
<tr>
<td>total minimum required units</td>
<td>13</td>
</tr>
</tbody>
</table>

**SPAN-120**  First Term Spanish
3 units  SC
- 90 hours lecture per term
- Note: This course is equivalent to two years of high school study.

This is a basic course in understanding, speaking, reading, and writing Spanish. It offers a balanced approach to language and culture. Basic communicative functions and structures are introduced, as well as basic exploration of the culture and countries of the Spanish-speaking world. C-ID SPAN 100, CSU, UC

**SPAN-121**  Second Term Spanish
5 units  SC
- 90 hours lecture per term
- Prerequisite: SPAN-120 or two years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is the second course in a sequence of Spanish language courses. It addresses the understanding, speaking, reading and writing of the Spanish language. The course continues to expand vocabulary, communicative functions and structures. The course will continue the examination of the culture of the Spanish-speaking world. C-ID SPAN 110, CSU, UC

**SPAN-150**  Topics in Spanish
3-4 units  SC
- Variable hours

A supplemental course in Spanish to provide a study of current concepts and problems in Spanish and related subdivisions. Specific topics will be announced in the schedule of classes. CSU

**SPAN-155**  First Term Beginning Conversational Spanish
3 units  SC
- 54 hours lecture per term
- Note: This course does not satisfy major or general education requirements.

This is the first term of the conversational Spanish series. Basic grammar and vocabulary as well as an introduction to Spanish culture will be covered. CSU

**SPAN-156**  Second Term Beginning Conversational Spanish
3 units  SC
- 54 hours lecture per term
- Recommended: SPAN-155 or equivalent
- Note: This course does not satisfy the academic requirements of the SPAN-120-121 series.

This is the second term of the beginning Spanish conversation series. It is a participatory class based on practical material with oral-aural practice. The preterit and imperfect tenses are introduced and contrasted. New vocabulary and cultural material is covered. CSU

**SPAN-157**  Third Term Beginning Conversational Spanish
3 units  SC
- 54 hours lecture per term
- Recommended: SPAN-156 or equivalent
- Note: This course does not satisfy the academic requirements of the SPAN-120-121 series.

This is the third term of the beginning Spanish conversation series. It is a participatory class based on practical material with oral-aural practice. The future and conditional tenses are emphasized and the subjunctive mood is introduced. New vocabulary and cultural material are covered. CSU
SPAN-220  Third Term Spanish
5 units  SC
- 90 hours lecture per term
- Prerequisite: SPAN-121 or three years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is a third term intermediate Spanish course which develops fluency in understanding, speaking, reading and writing Spanish. The preterit and imperfect tenses and compound tenses are reviewed and refined, the uses of the present subjunctive are expanded and new vocabulary and idiomatic expressions are introduced. Selected readings about Latin American and Spanish culture and literature will be explored. This course is taught entirely in Spanish. C-ID SPAN 200, CSU, UC.

SPAN-221  Fourth Term Spanish
5 units  SC
- 90 hours lecture per term
- Prerequisite: SPAN-220 or four years of high school study or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is a fourth term intermediate Spanish course which develops functional fluency in understanding, speaking, reading and writing Spanish. The use of the imperfect subjunctive is reviewed and expanded; the pluperfect subjunctive and the sequence of tenses are introduced as well as new vocabulary and idiomatic expressions. Selected readings about Latin American and Spanish culture and literature will be explored. This course is conducted entirely in Spanish. C-ID SPAN 210, CSU, UC.

SPAN-230  Fifth Term Spanish
3 units  SC
- 54 hours lecture per term
- Prerequisite: SPAN-221 or equivalent
- Note: Students may meet equivalency in a variety of ways. Students should seek assistance at Admissions and Records.

This is an advanced Spanish language course emphasizing reading, writing, listening, and speaking skills. The rich Hispanic heritage is explored through a wide range of materials including short stories, articles, poems, films, and documentaries. This course is taught entirely in Spanish. CSU, UC.

SPAN-231  Sixth Term Spanish
3 units  SC
- 54 hours lecture per term
- Recommended: SPAN-230 or equivalent

This is an advanced Spanish language course emphasizing more complex reading, writing, listening, and speaking skills. The rich Hispanic heritage is explored through a wide range of materials including short stories, articles, poems, films, and documentaries. CSU, UC.

SPAN-298  Independent Study
.5-.3 units  SC
- Variable hours
- Note: Submission of acceptable educational contract to department and Instruction Office is required.

This course is designed for advanced students who wish to conduct additional research, a special project, or learning activities in a specific discipline/subject area and is not intended to replace an existing course. The student and instructor develop a written contract that includes objectives to be achieved, activities and procedures to accomplish the study project, and the means by which the supervising instructor may assess accomplishment. CSU.

SPAN-299  Student Instructional Assistant
.5-.3 units  SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistants function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled. CSU.

SPECIAL EDUCATION – SPEDU

Emily Stone, Dean
Student Support Services
Student Services Center, SSC-122

Possible career opportunities
Students who earn a special education paraeducator/instructional assistant certificate of achievement or degree are prepared for entry-level employment assisting students and individuals with disabilities in education and rehabilitation settings.

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in arts degree
Special education paraeducator/instructional assistant

Students completing the program will be able to...
A. analyze state and federal legislation pertaining to general and special education.
B. use a variety of instruction strategies and materials that respect individual differences.
C. understand how culture affects relationships among children, families, and schooling.
Special education

The associate in arts degree in special education paraeducator/instructional assistant is designed as a two-year curricular pathway that offers students a broad general education while integrating an in-depth study of the skills and knowledge required to work with people with various disabilities in a variety of educational and related rehabilitation settings. The courses are intended to introduce students to career opportunities in special education or other disability related fields, and provide preparation for transfer to four-year institutions to continue their course of study in general education and special education. Classes are designed to serve working individuals wishing to improve their applied skills and professional growth.

To earn a degree, students must complete each course used to meet a major requirement with a “C” grade or higher. Required courses are available in the evening and during the day. Certain courses may satisfy both major and general education requirements; however, the units are only counted once. Students who intend to transfer to a four-year program in education/teacher preparation should consult with a counselor regarding specific requirements.

Required courses are available in the evening and during the day. “C” grade or higher. Required courses are available in the evening and during the day.

To earn a degree, students must complete each course used to meet a major requirement with a “C” grade or higher. Required courses are available in the evening and during the day.

Certificate of achievement
Special education paraeducator/instructional assistant

Students completing the program will be able to...

A. analyze state and federal legislation pertaining to general and special education.
B. use a variety of instruction strategies and materials that respect individual differences.
C. demonstrate and understanding of how culture affects relationships among children, families, and schooling.

This entry-level program prepares students with practical skills and knowledge to work with people with disabilities in a variety of educational and rehabilitation settings. Additionally, the courses are intended to introduce students to career opportunities in special education or other disability related fields, and provide preparation for transfer to four-year institutions to continue their course of study in general education and special education. Classes are designed to serve working individuals wishing to improve their applied skills and professional growth.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or higher. Required courses are available in the evening and during the day.

Required courses:

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<th>Course</th>
<th>Units</th>
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<tbody>
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<td>PSYCH-122</td>
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<tr>
<td>SPEDU-101</td>
<td>3</td>
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<tr>
<td>SPEDU-102</td>
<td>3</td>
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<tr>
<td>SPEDU-103</td>
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<td>plus 2-4 units from:</td>
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Required courses:

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<td>total minimum required units</td>
<td>23</td>
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</table>
SPEDU-101 Introduction to Disabilities
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course examines the historical and cultural context of disability issues and integrates international perspectives on the changing roles of people with disabilities. The legal and functional definitions of physical, communicative, sensory, psychological, neurological, and developmental disabilities will be covered. Acquired versus congenital disabilities will be differentiated, and all forms of chronic/progressive illnesses will be explored. CSU

SPEDU-102 Historical Perspectives of Disabilities and the Law
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course will examine the legal rights of the disabled, beginning with historical roots of the disability movement in the United States. Essential understanding of the earliest to current legislation governing access to education in federal, state, and local legal mandates will be emphasized. CSU

SPEDU-103 Classroom Strategies for the Special Education Paraeducator
3 units SC
- 54 hours lecture per term
- Recommended: Eligibility for ENGL-122 or equivalent
This course explores the basic principles of pragmatic pro-social skills strategies used by the special education para-professional within the educational workplace. Students will learn effective communication techniques to facilitate and manage appropriate student behavior and learning. CSU

SPEDU-295 Occupational Work Experience Education in SPEDU
1-4 units SC
- May be repeated three times
- Variable hours
- Note: In order to enroll in SPEDU-295, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

SPEDU-295 is supervised employment that extends classroom learning to the job site and relates to the student's chosen field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

SPEDU-296 Internship in Occupational Work Experience Education in SPEDU
1-4 units SC
- May be repeated three times
- Variable hours
- Note: In order to enroll in the SPEDU-296 course, students must be interning or volunteering, register for the course, complete an online Employment Form, and participate in an orientation. The Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.

SPEDU-296 is a supervised internship in a skilled or professional level assignment in the student's major field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

SPORTS MEDICINE/ATHLETIC TRAINING
See Kinesiology theory - KINES

STEAMFITTING – STMFT
Tish Young, Dean
Physical Sciences and Engineering Division
Physical Sciences Building, Room 263

Possible career opportunities
In collaboration with Plumbers and Steamfitters Union Local 159 email: info@plumbers159.org and Plumbers-Steamfitters-Refrigeration Union Local 342 www.ua342.org, DVC offers two five-year apprenticeship programs: steamfitting and plumbing. Apprenticeship is training that is designed to prepare an individual for a career in the skilled crafts and trades. Apprentices develop technical skills, experience the sharing of assignments and see how technical tasks relate specifically with theoretical knowledge and interpretation. Apprentices earn a wage while learning. Enrollment in this program is restricted. You must be registered as an apprentice with the State of California to participate in the program and accepted into the apprenticeship program by our Union partners.

Plumbers-Steafitters-Refrigeration Union Local 342, Joint Apprenticeship and Journeymen Training Office
935 Detroit Avenue
Concord, CA 94518-2501
925-686-0730
Steamfitting

Plumbers and Steamfitters Local 159
1308 Roman Way
Martinez, CA 94553
800-443-0220 or
925-229-0883
email: info@plumbers159.org

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Associate in science degree
Steamfitting

Students completing the program will be able to...
A. discuss safety harness practices during rigging.
B. apply mathematical formulas for calculating travel on a spool.
C. demonstrate knowledge of using a band saw.
D. use proper method in fabricating a copper spool.
E. explain the responsibilities of a journey person with regard to training an apprentice on the job.
F. demonstrate use of tubing benders.

This program is offered in collaboration with Plumbers and Steamfitters Union Local 159 and Plumbers and Steamfitters Refrigeration (HVACR) Union Local 342. Apprenticeship is training that is designed to prepare an individual for a career in the skilled crafts and trades. Apprentices develop technical skills, experience the sharing of assignments and see how technical tasks relate specifically with theoretical knowledge and interpretation. Apprentices earn a wage while learning. Enrollment in this program is restricted. You must be registered as an apprentice with the State of California to participate in the program and accepted into the apprenticeship program by our union partners.

This program prepares students to become steamfitters and includes an introduction to the installation, maintenance, and repair of different types of pipe systems; tool use; material applications and storage; and safety. Upon completion of the program, students will be able to install pipe systems that move liquids or gases under high pressure and use many different materials and construction techniques, depending on the type of project. They will be able to follow building plans or blueprints and instructions from supervisors to lay out the job and work efficiently with the materials and tools of the trade.

To earn an associate in science degree with a major in steamfitting, students must complete 20 out of 31 core courses to meet their individual educational and career goals. In addition they must complete General Education Option 1 (DVC General Education). Students must complete each course used to meet a major requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the major. The associate in science degree with a major in steamfitting is not a transfer program.

DVC steamfitting students who intend to transfer must consult with a program advisor or counselor to ensure that the requirements for transfer to baccalaureate institutions of their choice are met.

**complete at least 30 units from:**

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<thead>
<tr>
<th>Course Code</th>
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<td>Oxygen/Acetylene Cutting</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>STMFT-115</td>
<td>Pipe Shop I</td>
<td>1.5-2.5</td>
</tr>
<tr>
<td>STMFT-116</td>
<td>Pipe Shop II</td>
<td>1.5-2.5</td>
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<tr>
<td>STMFT-117</td>
<td>Related Science in the Piping Trades</td>
<td>1.5-2.5</td>
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<tr>
<td>STMFT-118</td>
<td>Beginning Drawing and Plan Reading</td>
<td>1.5-2.5</td>
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<td>Advanced Drawing and Plan Reading for the Piping Trades</td>
<td>1.5-2.5</td>
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<td>Tube Bending</td>
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<td>Construction Management in Steamfitting</td>
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</tbody>
</table>

**total minimum required units**

30-50

Certificate of achievement
Steamfitting

Students completing the program will be able to...
A. demonstrate proper isometric drawing technique.
B. apply mathematical formula for calculating load weight on pipe.
C. use the proper method to cut a steel plate, using an OXY/ACT torch.
D. explain proper brazing technique for copper.
E. demonstrate proper knot tying.
F. demonstrate proper preparation for a beveled coupon.
Steamfitting

This program is offered in collaboration with Plumbers and Steamfitters Union Local 159 and Plumbers-Steemflters-Refrigeration (HVACR) Union Local 342. Apprenticeship is training that is designed to prepare an individual for a career in the skilled crafts and trades. Apprentices develop technical skills, experience the sharing of assignments and see how technical tasks relate specifically with theoretical knowledge and interpretation. Apprentices earn a wage while learning. Enrollment in this program is restricted. You must be registered as an apprentice with the State of California to participate in the program and accepted into the apprenticeship program by our union partners.

This program prepares students to become steamfitters and includes an introduction to the installation, maintenance, and repair of different types of pipe systems; tool use; material applications and storage; and safety. Upon completion of the program, students will be able to install pipe systems that move liquids or gases under high pressure and use many different materials and construction techniques, depending on the type of project. They will be able to follow building plans or blueprints and instructions from supervisors to lay out the job and work efficiently with the materials and tools of the trade.

To earn a certificate of achievement, students must complete 14 out of 19 core courses. Students must complete each course used to meet a major requirement with a "C" grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the certificate. The courses required for the certificate of achievement also meet some of the requirements of the major for the associate of science degree.

complete at least 21 units from:

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<td>STMFT-128</td>
<td>Tube Bending</td>
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total minimum required units 21-35

Certificate of accomplishment
Steamfitting

Students completing the program will be able to:

A. explain the responsibilities of a journey person with regards to training an apprentice on the job.
B. apply mathematical formula for calculating load weight on pipe.
C. demonstrate proper knot tying.
D. use the proper method to cut a steel plate, using an OXY/ACT torch.

This program is offered in collaboration with Plumbers and Steamfitters Union Local 159 and Plumbers-Steemflters-Refrigeration (HVACR) Union Local 342. Apprenticeship is training that is designed to prepare an individual for a career in the skilled crafts and trades. Apprentices develop technical skills, experience the sharing of assignments and see how technical tasks relate specifically with theoretical knowledge and interpretation. Apprentices earn a wage while learning. Enrollment in this program is restricted. You must be registered as an apprentice with the State of California to participate in the program and accepted into the apprenticeship program by our union partners.

Program content includes an introduction to the installation, maintenance, and repair of different types of pipe systems; tool use; material applications and storage; and safety. Upon completion of the program, students will be able to install pipe systems that move liquids or gases under high pressure and use many different materials and construction techniques, depending on the type of project. They will be able to follow building plans or blueprints and instructions from supervisors to lay out the job and work efficiently with the materials and tools of the trade.

To earn a certificate of accomplishment students must complete five out of seven core courses. Students must complete each course used to meet a major requirement with a “C” grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the certificate. The courses required for the certificate of accomplishment also meet some of the requirements of the certificate of achievement and major for the associate of science degree.

complete at least 10 units from:

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<tr>
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total minimum required units 10.5 – 17.5
Steamfitting

STMFT-110  OSHA-CPR
1.5-2.5 units  LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section. This class is the same as PLUMB-110.

This course covers the regulations governed by OSHA 30 that provide and recognize safe work practices. The student will receive certification in Cardio-Pulmonary Resuscitation and First Aid.

STMFT-111  Trade Mathematics
1.5-2.5 units  LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section. This class is the same as PLUMB-111.

This course covers the approaches to mathematical problem solving used in pipe fitting and metric conversion.

STMFT-112  Use and Care of Tools
1.5-2.5 units  LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course presents an introduction to the identification of tools encountered in the industrial environment and the proper use of trade-related tools.

STMFT-113  Welding Safety/Plate Welding
1.5-2.5 units  LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course presents an introduction to welding safety and theory. Student will also be introduced to plate arc welding.

STMFT-114  Oxygen/Acetylene Cutting
1.5-2.5 units  LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course presents an introduction to oxygen and acetylene cutting and safety. The processes on how to cut for various plate thicknesses and layouts will also be discussed and practiced.

STMFT-115  Pipe Shop I
1.5-2.5 units  LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction, to enhance the apprentices on-the-job training. The use of various pipe and fitting materials and their application; including using pipes and pipe fitting materials to build piping projects based on isometric drawings.

STMFT-116  Pipe Shop II
1.5-2.5 units  LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction to enhance the apprentice’s on-the-job training. Student will be introduced to basic isometric drawing and steam systems with copper connections to be made with solder and brazing procedures.

STMFT-117  Related Science in the Piping Trades
1.5-2.5 units  LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section. This class is the same as PLUMB-117.

This course covers the scientific and mechanical principles that are basic to the work of the piping industry.

STMFT-118  Beginning Drawing and Plan Reading for the Piping Trades
1.5-2.5 units  LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section. This class is the same as PLUMB-118.

This course covers the interpretation of drawings and sketches associated with piping installation.
STMFT-119 Advanced Drawing in the Piping Trades
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section. This class is the same as PLUMB-119.

In this course students will Interpret, coordinate and make drawings and sketches associated with piping installation.

STMFT-120 Instrumentation 1
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction to enhance the apprentice’s on-the-job training. Student will be introduced to the instrumentation includes basic descriptions of processes, loop diagrams and documentation in the instrumentation field.

STMFT-121 Instrumentation 2
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction to enhance the apprentice’s on-the-job training. Student will be introduced to the second part Instrumentation that will give the students the knowledge of pneumatic controls, liquid level instruments, analyzers and fiber optic signals.

STMFT-122 Steam Systems
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction to enhance the apprentice’s on-the-job training. Student will be introduced to the properties of saturated steam, traps, boilers and heating systems.

STMFT-123 Electricity for Steamfitting
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction to enhance the apprentice’s on-the-job training. Student will be introduced to the specialized knowledge and techniques required to make electrical systems operate and function properly for the steamfitter working in the instrumentation field.

STMFT-124 Industrial Rigging
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction to enhance the apprentice’s on-the-job training. Student will be introduced to identify safe work habits to use with industrial rigging. Load limits, crane ratings, equipment storage and handling are all covered.

STMFT-125 Beginning AutoCAD
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

Introductory course covering the computer application AutoCAD as it relates to the creation of technical drawings. Course covers two dimensional computer aided drafting of objects in orthographic projection. Hands-on training utilizing a comprehensive overview of the software package and its applications in pipe drafting is stressed. Students are recommended to have a basic knowledge of technical drawing.

STMFT-126 Advanced AutoCAD
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

Course is designed for students with previous knowledge and experience in using AutoCAD. Course covers surface/ wireframe and solid modeling features of AutoCAD for 3-dimensional modeling and photo realistic rendering, customization and optimal application of AutoCAD and utility options for presentation purposes and project management.
Steamfitting

STMFT-127 Pumps
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction to enhance the apprentice’s on-the-job training. Student will complete projects related to the different types, installation, operation and maintenance of industrial pumps.

STMFT-128 Tube Bending
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction to enhance the apprentice’s on-the-job training. Student will complete projects related to tube bending and installations. Several tubing connection assignments will assist the student in recognizing different tubing connectors.

STMFT-129 Union Heritage
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This program is designed to review the heritage and traditions of the United Association of Steamfitters and Welders. Students will learn about past and current events with presentations and classroom interactions.

STMFT-131 Pipe Welding 1
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction to enhance the apprentice’s on-the-job training. Student will learn techniques and methods for beginning welding processes for the steamfitting apprentice. Safe procedures and practices for use of cutting torch and introduction of groove pipe welding.

STMFT-132 Welding 5
1.5-3.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is an introduction to the techniques and methods for welding processes for the steamfitting apprentice. Students will learn how to identify various welding rods, electrodes, and their applications.

STMFT-133 Welding 6
1.5-3.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is an introduction to the techniques and methods for welding processes for the steamfitting apprentice. Techniques studied will include string beads on an open grooved pipe weld and proper torch positioning for advanced torch cutting.

STMFT-134 Welding 7
1.5-3.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is an introduction to the techniques and methods for welding processes for the steamfitting apprentice. The topics will include proper handling of grinders, weld coupons, identification of hazards, and an introduction to square groove welding processes.

STMFT-135 Welding 8
1.5-3.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is an introduction to the techniques and methods for welding processes for the steamfitting apprentice. Techniques studied will include single vee groove welding in various positions.
STMFT-136 Welding 9
1.5-3.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course introduces the techniques and methods for welding processes for steamfitting apprentices. Topics include identification of trapped slag using an x-ray image as well as completing a root bead in a welding coupon in 6G position.

STMFT-137 Welding 10
1.5-3.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is an introduction to the techniques and methods for welding processes for the steamfitting apprentice. The topics will include identification of materials, butt-weld root and filler beads, and tools needed for stainless steel welding processes.

STMFT-138 Orbital Welding
1.5-3.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction to enhance the apprentice’s on-the-job training. Student will learn techniques and methods for the Automatic Orbital Welding machine.

STMFT-140 Construction Management in Steamfitting
1.5-2.5 units LR
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

This course is designed to give related technical instruction to enhance the apprentice’s on-the-job training. Student will complete projects related to an introduction to the administrative procedures, plans and specifications, scheduling and other forms of communication in the construction field.

STMFT-150 Topics in Steamfitting
.3-4 units SC
- Variable hours
- Note: This program is sponsored by the International Brotherhood of Steamfitters and Plumbers and is for apprenticeship only. Course enrollment is limited to those who have been accepted by the local union responsible for the section.

A supplemental course in steamfitting to provide a study of current concepts and problems in steamfitting and related subdivisions. Specific topics will be announced in the schedule of classes.

STMFT-299 Student Instructional Assistant
.5-3 units SC
- Variable hours
- Note: Applications must be approved through the Instruction Office. Students must be supervised by a DVC instructor.

Students work as instructional assistants, lab assistants and research assistants in this department. The instructional assistant function as group discussion leaders, meet and assist students with problems and projects, or help instructors by setting up laboratory or demonstration apparatus. Students may not assist in course sections in which they are currently enrolled.

TRANSFER STUDIES – CSU

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Certificate of achievement
CSU general education breadth

Students completing the program will be able to...
A. communicate effectively, both verbally and in writing.
B. critically analyze and solve problems using the appropriate technique for the issue at hand, including appropriate use of logic, mathematics, multi-disciplinary, and cultural considerations where applicable.
C. critically examine the function, media, subject matter, organization, aesthetic, style, and relative excellence of representative examples of the arts, literature, philosophy, and foreign languages including approaches from various historical, cultural, and gender-based origins.
D. develop an understanding of the information available, the perspectives and approaches of the physical, biological, social, and behavioral sciences, appreciating the power and limits of these methods of inquiry and both individual, ethical, and societal responsibilities.
Transfer studies

Certificate of achievement - CSU General Education
This certificate is designed for students planning to transfer to the California State University (CSU) System. It offers students a program of study which meets the CSU General Education requirements. Although the certificate recognizes the completion of lower division CSU general education requirements, it does not guarantee admission to a specific campus within the CSU system nor does it guarantee admission to a specific major. Some majors and colleges may require a different lower division preparation and/or a higher GPA than is necessary for this certificate.

Students who intend to transfer must meet all current CSU transfer requirements including minimum GPA and eligibility for certification. Students are strongly advised to meet with a counselor to discuss transfer requirements and lower division major preparation that is needed for their intended transfer school. (Also see CSU GE transfer information in this catalog.)

| total minimum required units (CSU GE) | 39 |

TRANSFER STUDIES – IGETC

Program-level student learning outcomes
Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at www.dvc.edu/slo.

Certificate of achievement
Intersegmental General Education Transfer Curriculum (IGETC)

Students completing the program will be able to...
A. communicate effectively, both verbally and in writing.
B. critically analyze and solve problems using the appropriate technique for the issue at hand, including appropriate use of logic, mathematics, multi-disciplinary, and cultural considerations where applicable.
C. critically examine the function, media, subject matter, organization, aesthetic, style, and relative excellence of representative examples of the arts, literature, philosophy, and foreign languages including approaches from various historical, cultural, and gender-based origins.
D. develop an understanding of the information available, the perspectives and approaches of the physical, biological, social, and behavioral sciences, appreciating the power and limits of these methods of inquiry and both individual, ethical, and societal responsibilities.
E. organize and present information in person in a logical and understandable manner.
F. demonstrate proficiency in a language other than English, and knowledge of the associated history and culture, at the level expected from two years of high school study (for UC transfer).

| total minimum required units (IGETC) | 34 |

Note: Students intending to transfer to the CSU system are advised that an additional six units of study are required for the American Institutions graduation requirement from CSU.

WORK EXPERIENCE - WRKX

Kim Schenk, Senior Dean
Instruction Office
Administration Building, Room 214

Students may earn units for learning on-the-job through Work Experience Education. It is part of the total educational process that assists students in exploring and wisely choosing a career, preparing for full-time employment, and advancing in careers of their choice.

These courses are for students who are working full or part-time and interested in earning units while gaining practical work experience, either for pay, as interns, or as volunteers. College credit is granted for the following: WRKX-160: Students who are employed but have not declared a major or their jobs are unrelated to their major. WRKX-170: Students who are employed and their jobs are related to their major. WRKX-180: Students who are participating in internship or volunteer opportunities in jobs that are related to their major.
WRKX-160  General Work Experience Education
1-3 units  SC
• May be repeated three times
• Variable hours
• Note: In order to enroll in a WRKX course, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Students may earn one unit for five hours work per week or seventy-five hours work per term. Does not meet requirements for veterans' benefits. Employment Form can be accessed at www.dvc.edu/wrkx.
Incomplete grades are not awarded for WRKX. Students may repeat to a maximum of twelve units; an appeal will be required after three repetitions.
• Formerly COOP-160
WRKX-160 is supervised employment for students whose jobs do not relate to their college major or area of career interest. Under the supervision of a college instructor, students will acquire employability skills, desirable work habits, and career awareness through on-the-job and other learning experiences. CSU

WRKX-170  Occupational Work Experience Education
1-4 units  SC
• May be repeated three times
• Variable hours
• Note: In order to enroll in a WRKX-170, students must be employed, register for the course, complete an online Employment Form, and participate in an orientation. Employment forms can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.
• Formerly COOP-170
WRKX-170 is supervised employment that extends classroom learning to the job site and relates to the student’s chosen field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU

WRKX-180  Internship in Occupational Work Experience Education
1-4 units  SC
• May be repeated three times
• Variable hours
• Note: In order to enroll in the WRKX-180 course, students must be interning or volunteering, register for the course, complete an online Employment Form, and participate in an orientation. The Employment Form can be accessed at www.dvc.edu/wrkx. Incomplete grades are not awarded for this course.
• Formerly COOP-180
WRKX-180 is a supervised internship in a skilled or professional level assignment in the student’s major field of study or area of career interest. Under the supervision of a college instructor, students will engage in on-the-job and other learning experiences that contribute to their employability skills and occupational or educational goals. Internships may be paid, non-paid, or some partial compensation provided. Five hours work per week or seventy-five hours work per term is equal to one unit (paid) or one unit for four hours work per week or sixty hours per term (unpaid work). Students may earn up to a maximum of sixteen units; repetition allowed per Title 5 Section 55253. CSU
### FACULTY AND ADMINISTRATORS

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbott, Daniel</td>
<td>faculty - architecture</td>
<td>B.A. - University of Oregon</td>
</tr>
<tr>
<td>Agnost, Katy</td>
<td>faculty - English</td>
<td>B.A. - UC Davis, M.A. - San Francisco State University</td>
</tr>
<tr>
<td>Akanyirige, Emmanuel</td>
<td>faculty - mathematics</td>
<td>B.S., M.S. - Ball State University</td>
</tr>
<tr>
<td>Akiyama, Mark</td>
<td>faculty - psychology</td>
<td>B.A. - UC Berkeley, Ph.D. - University of Michigan</td>
</tr>
<tr>
<td>Alves, Stephanie</td>
<td>registrar</td>
<td>A.A. - Los Medanos College</td>
</tr>
<tr>
<td>Antonakos, Cory</td>
<td>faculty - chemistry</td>
<td>B.S. - George Washington University, M.S. - UC Berkeley</td>
</tr>
<tr>
<td>Armstrong, Terry L.</td>
<td>faculty - counseling</td>
<td>B.A., M.A. - CSU Fresno</td>
</tr>
<tr>
<td>Bailey, Jamie Lynn</td>
<td>faculty - counseling</td>
<td>B.A., M.A. - CSU Hayward</td>
</tr>
<tr>
<td>Bairos, Monte</td>
<td>faculty - music</td>
<td>A.A. - Merced College, B.A. - CSU Stanislaus, M.M. - University of Colorado, Boulder</td>
</tr>
<tr>
<td>Ballif, Daniela</td>
<td>fiscal services manager</td>
<td>B.S. - University of Tirana, M.B.A. - Brigham Young University</td>
</tr>
<tr>
<td>Barber, Thomas P.</td>
<td>faculty - English</td>
<td>B.A. - Saint Mary's College, M.A. - San Francisco State University, M.F.A. - Pacific Lutheran University</td>
</tr>
<tr>
<td>Barksdale, Jessica</td>
<td>faculty - English</td>
<td>B.A. - CSU Stanislaus, M.A. - San Francisco State University</td>
</tr>
<tr>
<td>Barlow, Andrew L.</td>
<td>faculty - social science</td>
<td>B.A. - Oberlin College, M.A., Ph.D. - Harvard University</td>
</tr>
<tr>
<td>Beaulieu, Ellen</td>
<td>faculty - chemistry</td>
<td>B.S. - University of Georgia, Ph.D. - UC Berkeley</td>
</tr>
<tr>
<td>Bennett, Troy</td>
<td>faculty - art digital media</td>
<td>B.F.A. - Plymouth State University, M.F.A. - Rochester Institute of Technology</td>
</tr>
<tr>
<td>Bernhardt, Paul J.</td>
<td>faculty - culinary arts</td>
<td>A.S. - Johnson and Wales College, B.E. - San Francisco State University</td>
</tr>
<tr>
<td>Bersamina, Leo</td>
<td>faculty - art</td>
<td>A.A. - Cabrillo College, B.F.A. - San Francisco State University, M.F.A. - Yale University</td>
</tr>
<tr>
<td>Bessie, Adam</td>
<td>faculty - English</td>
<td>B.A. - UC Davis, M.A. - San Francisco State University</td>
</tr>
<tr>
<td>Black, Bethalynn</td>
<td>faculty - horticulture</td>
<td>B.A., M.A. - New College of CA</td>
</tr>
<tr>
<td>Blackwell-Stratton, Marian</td>
<td>faculty - English</td>
<td>B.A. - UC Berkeley, M.F.A. - Mills College</td>
</tr>
<tr>
<td>Brecha, Jane</td>
<td>faculty - mathematics</td>
<td>B.A. - UC Santa Cruz, M.S. - CSU Hayward</td>
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<tr>
<td>Breton, Hopi</td>
<td>faculty - art</td>
<td>B.A. - Loyola University, M.F.A. - Montana State University</td>
</tr>
<tr>
<td>Brizzi, Alicia</td>
<td>faculty - counseling</td>
<td>B.S. - Reed College, M.S.W. - Hunter College</td>
</tr>
<tr>
<td>Bross, Janice</td>
<td>foundation development officer</td>
<td></td>
</tr>
<tr>
<td>Buchanan, James</td>
<td>director - maintenance and operations</td>
<td></td>
</tr>
<tr>
<td>Burns, Laura</td>
<td>faculty - chemistry</td>
<td>B.S. - Texas Lutheran College, Ph.D. - UC Davis</td>
</tr>
<tr>
<td>Canada, Yvonne</td>
<td>faculty - counseling</td>
<td>B.A. - Cal Poly San Luis Obispo, M.A. - Bowling Green State University</td>
</tr>
<tr>
<td>Capozzo, Christopher</td>
<td>faculty - psychology</td>
<td>B.A. - UC Davis, M.A. - John F. Kennedy University</td>
</tr>
</tbody>
</table>
Faculty and administrators

Carbonell, Ana María (ía)
faculty - English
B.A. - Tufts University
M.S., Ph.D. - UC Santa Cruz

Carrick, Jason
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M.A. - CSU Bakersfield
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M.F.A. - Pacific University

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The names on the previous pages represent full-time faculty and administrators. Part-time faculty names appear on the DVC website in the faculty/staff directory www.dvc.edu/about/administration/directories.html
INDEX

A
A.A./A.S. degree (see Associate degree) 47
Academic calendar 9
Academic integrity 32
Academic dismissal 32
Academic freedom statement 7
Academic honors 28
Academic probation 32
Academic renewal 31
Accounting 122
Addiction studies 62
Administration of justice 65
Admission requirements 9
Advanced placement 19
Alternatives to course credit 19
Anthropology 72
Appeals 29, 32
Arabic 74
Architecture 75
Art 81
Art digital media 93
Art history 100
Assessment center 13
Associate degree 47
Associate degree list 57
Astronomy 103
Athletics (see Kinesiology) 286
Auditing of classes 17

B
Biological science 103
Board of Governors' fee waiver 12
Books, supplies and course material fees 10
Broadcast communication arts (see Film, television, and electronic media) 238
Business 112
Business accounting 122
Business management 126
Business marketing 128
Business real estate 129

C
Cal Grant 12
California residence status 9
California resident enrollment fees 10
CalWORKs program 13
Campus security act 43
Career 130
Career and employment services 13
Career technical programs 56
Catalog rights 48
Certificate list 57
Chemistry 131
Chinese 133
Class schedule 8
CLEP 24
Code of conduct 35
Colloquia 133
Communication studies 134
Complaints about staff, managers or faculty 43
Computer Center 13
Computer information systems 137
Computer network technology 143
Computer science 149
Construction 154
Continuous enrollment for degrees and certificates 48
Contra Costa Community College District 7
Cooperative Agencies Resources for Education 13
Cooperative Education (see Work experience) 372
Counseling 160
Course co-requisites 17
Course descriptions 62
Course material fees 10
Course prerequisites 17
Course repetition 31
Course requirements and credit 17
Course substitution policy 19
Credit by exam 27
CSU transfer 45, 52, 61
CSU general education requirements 50
Culinary arts 162

D
Dance 172
Debts, student 11
Dental assisting 177
Dental hygiene 181
Disability support services 13
Dismissal 32
Drama 187
Drug free campus 43
DVC summer programs 9

E
Early childhood education 194
Economic development 7
Economics 204
Education 206
Electrical/electronics technology 207
Eligibility for admissions 9
Energy systems 211
Engineering 213
Engineering technology 218
English 225
English as a Second Language 234
Enrollment fee 10
# Index

| Enrollment lab | 13 |
| Environmental Science | 237 |
| EOPS | 13 |
| Equal opportunity policy | 13 |
| ESL | 234 |
| Evening classes | 8 |
| Extended Opportunities Programs and Services (EOPS) | 13 |

**F**
- Faculty and administrators | 374 |
- Fairness in grading | 29 |
- Federal loans | 12 |
- Federal PELL Grant | 12 |
- Federal Supplemental Educational Opportunity Grant (FSEOG) | 12 |
- Federal Work Study (FWS) | 12 |
- Fees | 10, 11 |
- Field trip fees | 10 |
- Field trips | 10, 27 |
- Film, television, and electronic media | 238 |
- Financial aid | 12, 13 |
- Freedom of expression policy | 33 |
- French | 245 |
- Full-time status | 16 |

**G**
- General education requirements, associate degrees | 47, 48, 50 |
- General education requirements, CSU | 46, 56 |
- General education transfer curriculum, intersegmental (IGETC) | 46, 52 |
- Geography | 248 |
- Geology | 253 |
- German | 256 |
- Grade changes, corrections, student appeals | 29 |
- Grade policy | 28 |
- Graduation honors | 28 |
- Graduation requirements | 48 |
- Grants, student | 12 |
- Grievance procedures | 15 |

**H**
- Health science | 258 |
- Heating, ventilation, air conditioning and refrigeration | 261 |
- History | 265 |
- Honors | 28 |
- Horticulture | 270 |
- Humanities | 276 |
- Hybrid courses | 8 |

**I**
- IGETC | 46 |
- Impacted majors | 45 |
- Improving a GPA | 31 |

| Incomplete grades | 28 |
| Independent study courses | 17 |
| Industrial design | 278 |
| Instructional material policy | 33 |
| Instructors' rights policy | 31 |
| Interdisciplinary studies | 270 |
| International students | 10 |
| Institutional learning outcome | 7 |
| Italian | 279 |

**J**
- Japanese | 281 |
- Journalism | 284 |

**K**
- Kinesiology | 286 |

**L**
- Leave of absence | 28 |
- Library services | 13 |
- Library studies | 310 |
- Library technology | 311 |
- Loans | 12 |

**M**
- Management (see Business management) | 126 |
- Marketing (see Business marketing) | 128 |
- Material fees | 10 |
- Mathematics | 314 |
- Matriculation | 33 |
- Military service credit | 27 |
- Music | 321 |
- Music industry studies | 329 |

**N**
- Non-residence status | 9 |
- Non-resident fees | 10 |
- Nutrition | 333 |

**O**
- Oceanography | 335 |
- Online and hybrid classes | 8 |
- Open course policy | 16 |
- Other aid and benefits | 12 |

**P**
- Parking fees | 11 |
- Pass/no pass (P/NP) | 28 |
- PELL Grant, federal | 12 |
- Persian | 336 |
- Philosophy | 337 |
- Photography (see art) | 81 |
- Physical education (see Kinesiology) | 286 |
- Physical science | 340 |
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