2008-2009 catalog addendum

DIABLO VALLEY COLLEGE

Pleasant Hill Campus ■ San Ramon Campus ■ Walnut Creek Center

www.dvc.edu
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I. Changes to requirements

CSU general education requirements

(Note: changes are underlined, deletions are indicated by strike-through.)

At the time this catalog went to press, CSU had not approved the G.E. list for 2008-2009. The information on these two pages is the list that was approved for 2008-2009 and is subject to change. Please check with the counseling department for up-to-date information. The current CSU G.E. list may be found at www.assist.org.

Note: A course may be listed in more than one area, but it may be used to satisfy only one subject requirement except in U.S. History, Constitution and American Ideals.

A. Communication in the English language and critical thinking

Complete 9 units (one course from A-1, A-2 and A-3). A grade of "C" or higher is required for certification, CSU admission and/or graduation.

A-1. Oral communication

Course requirement - 3 units
Speech 120

A-2. Written communication

Course requirement** - 3 units
English 122
**AP English Language and Composition or English Literature and Composition exam with score of 3 or higher meets this requirement.

A-3. Critical thinking

Course requirement - 3 units
Complete one course from:
English 123, 126
History 122
Philosophy 130
Psychology 145
Sociology 122
Speech 121, 123

B. Physical universe and its life forms

At least 3 units from B-1, at least 3 units in B-2, at least one lab course to meet B-3; at least 3 units in B-4. Courses that meet the laboratory requirement are noted below by an asterisk (*) beside the number.

B-1. Physical science

Course requirement** - 3-5 units
Complete one course from:
Astronomy 110 (add Astronomy 130* for lab), 120 (add Astronomy 130* for lab), 128*
Chemistry 106*, 108*, 109*, 120*, 121*, 226*, 227*
Geography 120 (add Geography 121* for lab), 140 (add Geography 141* for lab)
Geology 120 (add Geology 122* for lab), 121 (add Geology 124* for lab), 125
Oceanography 101, 102*
Physical Science 112
Physics 110 (add Physics 111* for lab), 113, 120*, 121*, 129*, 130*, 135*, 140*, 145*, 160*, 170, 205*,
**AP Chemistry or Environmental Science or Physics B or Physics C with a score of 3 or higher meets both B-1 and B-3 requirements.

B-2. Life science

Course requirement** - 3-5 units
Complete one course from:
Anthropology 115, 140 (add Anthropology 141L* for lab)
**AP Biology exam with a score of 3 or higher meets both B-2 and B-3 requirements.

B-3. Laboratory activity

Course requirement:
One course in B-1 or B-2 must be a laboratory course. Courses that meet the lab requirement are designated by an asterisk (*) following the course number.

B-4. Mathematics/quantitative reasoning

Course requirement** - 3-4 units
A grade of "C" or higher is required.
Complete one course from:
Business 240
Mathematics 121, 124, 135, 135SP (3 units), 142, 181, 182, 183, 191, 192, 193, 194, 195, 292, 294
**AP Calculus AB or Calculus BC or Statistics with a score of 3 or higher meets this requirement.
C. Arts, literature, philosophy and foreign language

Course requirement - 9 units
Complete at least one 3 unit course in the Arts (C-1), one 3 unit course in the Humanities (C-2), and 3 units from C-1 and/or C-2, for the total requirement of 9 units.

C-1. Arts (Art, Dance, Music, Theater)

Course requirement** - 3-6 units
Complete one or more courses from:
Architecture 120, 121, 130, 155, 160
Art 105, 120, 126, 140, 152, 160
Art Digital Media 214
Art History 193, 195, 196, 197, 199
Broadcast Communication Arts 140
Dance 201
Drama 122, 139, 140, 141, 142, 150, 170, 180, 181
English 152
Film 140, 160, 180, 280, 281, 282, 283, 284
Music 252, 255
Music Literature 110, 112, 113, 114, 115, 116, 117, 118
Music Performance 136, 140, 144, 162, 166, 176, 180, 240, 290
Speech 148
**AP Art History with a score of 3 or higher counts as one course towards this requirement.

C-2. Humanities (Literature, Philosophy, Foreign Language)

Course requirement** - 3-6 units
Complete one or more courses from:
Arabic 121
Architecture 155, 160
Broadcast Communication Arts 260
Chinese 121, 220, 221
Drama 142
English 150, 151, 152, 153, 154, 162, 163, 164, 166, 167, 168, 170, 172, 173, 175, 177, 180, 190, 222, 223, 224, 225, 252, 253, 262, 263, 272, 273
Film 160
French 121, 220, 221, 230, 231
German 121, 147, 220, 221, 230, 231
History 120, 121, 124, 125, 126, 127, 128, 129, 130, 135, 136, 140, 141, 150, 151, 160, 170, 171, 240
Italian 121, 147, 220, 221, 230, 231
Japanese 121, 147, 220, 221, 245
Latin 121
Persian 121
Philosophy 120, 122, 140, 141, 220, 221, 224, 225
Russian 121, 220, 221

D. Social, political and economic institutions and behavior, historical background

At least 9 units required with courses in at least 2 disciplines. A course may be listed in more than one group, but may be counted only once.**

D-1. Anthropology and archaeology
Anthropology 120, 125, 130, 135, 150

D-2. Economics
Economics 101, 200, 220, 221

D-3. Ethnic studies
Anthropology 120, 135
History 124, 125, 126, 127, 128, 129, 130, 170, 171
Psychology 140, 141
Social Science 115, 120, 220
Sociology 131, 135

D-4. Gender studies
History 170, 171
Social Science 120, 220
Sociology 124

D-5. Geography
Geography 130, 135

D-6. History
History 120, 121, 124, 125, 126, 127, 128, 129, 130, 135, 136, 140, 141, 150, 151, 160, 170, 171, 240

D-7. Interdisciplinary social or behavioral science
Gerontology 100
Journalism 110
Social Science 110, 111, 115, 120, 123, 162, 163, 220

D-8. Political science, government and legal institutions
Political Science 120, 121, 151, 220, 240, 250

D-9. Psychology
Early Childhood Education 124
D-10. Sociology and criminology

Administration of Justice 120, 139
Sociology 120, 121, 123, 124, 125, 131, 135, 140

**Each of the following AP tests with a score of 3 or higher counts as one course towards this requirement:**
- Comparative Government and Politics
- European History
- Human Geography
- Macroeconomics
- Microeconomics
- Psychology
- U.S. History
- World History

E. Lifelong understanding and self development

Course requirement - 3 units
Complete one course from:
- Career 110
- Counseling 120
- Early Childhood Education 124
- Health Science 124, 140, 170
- Nutrition 115, 160
- Physical Education-Dance 130, 136, 142
- Psychology 122, 140, 141, 160, 200

Graduation requirement in U.S. History, Constitution and American Ideals

Course requirements - 6 units

Required for graduation from CSU. This graduation requirement may be fulfilled, but is not required, prior to transfer. Courses used to fulfill this requirement may double count with courses in Area C or D.

Choose one pair of courses from the following list:
- History 120 and History 121 or 124 or 128 or 171 or Political Science 121 or 151 or Social Science 111 or 220;
- History 121 and History 120 or 127 or Political Science 121 or Social Science 111 or 115 or 120 or 220;
- History 124 and History 120 or 127 or Social Science 120
- History 125 and Political Science 121 or Social Science 111 or 220;
- History 126 and Political Science 121 or Social Science 111 or 220;
- History 127 and History 121 or 124 or 128 or 171 or Political Science 121 or 151 or Social Science 111 or 220;
- History 128 and History 120 or 127 or Political Science 121 or Social Science 111 or 115 or 120 or 220;
- History 129 and Political Science 121 or Social Science 111 or 220;
- History 130 and Political Science 121 or Social Science 111 or 220;
- History 170 and History 171 or Political Science 121 or Social Science 111 or 220;
- History 171 and History 120 or 127 or 170 or Political Science 121 or Social Science 111 or 115 or 120 or 220;
- Political Science 121 and History 120 or 121 or 125 or 126 or 127 or 128 or 129 or 130 or 170 or 171 or Social Science 120;
- Political Science 151 and History 120 or 127 or Social Science 120;
- Social Science 111 and History 120 or 121 or 125 or 126 or 127 or 128 or 129 or 130 or 170 or 171 or Social Science 120;
- Social Science 115 and History 121 or 128 or 171;
- Social Science 120 and History 121 or 124 or 128 or 171 or Political Science 121 or 151 or Social Science 111 or 220;
- Social Science 220 and History 120 or 121 or 125 or 126 or 127 or 128 or 129 or 130 or 170 or 171 or Social Science 120

(U.S. History, Constitution and American Ideals is considered by CSU to be a statutory rather than a general education requirement.)

IGETC Intersegmental general education transfer curriculum

(Note: changes are underlined, deletions are indicated by strike-through.)

At the time this catalog went to press, the IGETC list for 2008-2009 had not yet been approved. The information on these pages is the list that was approved for 2008-2009 and is subject to change. Please check with the counseling department for up-to-date information. The current IGETC list may be found at www.assist.org.

Area 1. English communication

Course requirement:
- CSU - 3 courses required, 1 each from group A, B and C.
- UC - 2 courses required, 1 each from group A and B.

1-A, English composition

Course requirement - 3 units, 1 course
- English 122

Note: AP English Language and composition or English Literature and composition with a score of 3 or higher meets this requirement.
## 1-B. Critical thinking - English composition

Course requirement - 3 units, 1 course

Complete 1 course from:
- English 123, 126
- History 122
- Philosophy 130
- Sociology 122
- Speech 121+

## 1-C. Oral communication

Course requirement (CSU only) - 3 units, 1 course

Speech 120

**Note:** 1-C is a CSU requirement only. Students transferring to UC do not have to meet the Area 1-C, "oral communication" requirement.

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### Area 2. Mathematical concepts and quantitative reasoning

Course requirement - 3 units, 1 course

Complete 1 course from:
- Business 240+
- Math 124+, 135+, 135SP+(3 units), 142+, 181, 182+, 183+, 191+, 192+, 194, 195, 292, 294

**Note:** AP Math Calculus AB, AP Math or Calculus BC or AP Statistics with a score of 3 or higher meets this requirement.

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### Area 3. Arts and humanities

Course requirement - 9 units, at least 3 courses

This requirement includes taking at least one course from the Arts (3-A) and one from the Humanities (3-B).

#### 3-A. Arts

Complete 1 or more courses from:
- Art Digital Media 214
- Art History 193, 195, 196, 197, 199
- Dance 201
- Drama 139, 140, 141, 142, 180, 181
- Film 140, 160, 180+, 280, 281+, 282, 283, 284

**Note:** AP Art History with a score of 3 or higher meets this requirement.

#### 3-B. Humanities

Complete 1 or more courses from:
- Arabic 121*
- Architecture 155+, 160+
- Chinese 121*, 220*, 221*
- English 150, 151, 152+, 153, 154, 162, 163, 164, 166, 167, 168, 170, 172, 173, 175, 177, 180, 190, 252, 253, 262, 263, 272, 273

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### Area 4. Social and behavioral sciences

Course requirement - 9 units, at least 3 courses

**Complete at least 3 courses from at least 2 disciplines:**

- Administration of Justice^ 120
- Anthropology 120, 125, 130, 135, 150
- Early Childhood Education^ 124
- Economics 101+, 200+, 220+, 221+
- Geography 130, 135
- †History 120*+, 121*+, 124*, 125*, 126*, 127*+, 128*+, 129*, 130*, 135*, 136*, 140*, 141*, 150*, 151*, 170*+, 171*+, 240*
- Journalism 110
- †Political Science 120, 121, 220, 240, 250
- Psychology^ 122, 130, 140, 141, 160, 190, 210, 220, 225, 230, 240
- †Social Science 110, 111, 115, 120, 123+, 220
- Sociology^ 120, 121, 123, 124, 125, 131, 135, 140

**Note:** Each of the following AP tests with a score of 3 or higher counts as one course towards this requirement:
- Comparative Government and Politics
- European History
- Human Geography
- Macroeconomics
- Microeconomics
- Psychology
- U.S. Government and Politics
- U.S. History
- World History.
Area 5. Physical and biological sciences

(Note: changes are boxed, deletions are indicated by strike-through.)

Courses that meet the laboratory requirement are underlined and must be taken with matching lecture course.

Course requirement - 7-9 units, at least 2 courses

This requirement includes taking one physical science course and one biological science course from each of groups 5-A and 5-B. At least one course must have a laboratory.

5-A. Physical science

Course requirement - 3-5 units

Complete at least 1 course from:
- Astronomy 110+ (add Astronomy 130 for lab), 120+ (add Astronomy 130 for lab), 128+
- Chemistry 106+, 108+, 109+, 120, 121, 226, 227
- Geography 120, 121, 140, 141
- Geology 120, 121, 122, 124, 125
- Oceanography 101, 102
- Physical Science 112+
- Physics 110+, 111+, 113, 120+, 121+, 129+, 130+, 230+, 231+

Note: AP Chemistry or Environmental Science or Physics B or Physics C with a score of 3 or higher meets both 5A and 5C requirements.

5-B. Biological science

Course requirement - 3-5 units, at least 1 course

Complete at least 1 course from:
- Anthropology 115 (no lab), 140 (add Anthropology 141L for lab)
- Biological Science 101+, 102+, 116+, 117+, 119+, 120+, 126, 130, 131, 139+, 140+, 146+, 160, 170, 205

Note: AP Biology with a score of 3 or higher meets both 5B and 5C requirements.

5-C. Laboratory

Courses that meet the laboratory requirement are underlined in Area 5-A and 5-B and must be taken with matching lecture course

* Course may be listed in more than one area, but shall not be certified in more than one area except for courses in Languages other than English.
+ Indicates that transfer credit may be limited by either UC or CSU or both. Please consult with a counselor for additional information.

Area 6. Languages other than English (UC requirement only)

Students shall demonstrate proficiency in a language other than English in one of the following ways:

- Proficiency equivalent to two years of high school study in the same language. Three years of high school study in American Sign Language. (A junior or senior high school transcript or approved test score must be on file in the Admissions and Records Office.)
- Must have successfully completed one of the following foreign language courses:
  - Arabic 120
  - Chinese 120
  - German 120+, 146+
  - Japanese 120+, 146+
  - Persian 120
  - Russian 120
  - Sign Language 281
- Requirement validated by more advanced course.

Please see a counselor for details on required test scores or other alternatives to demonstrating proficiency.

CSU graduation requirement in U.S. History, Constitution and American Ideals

Choose one pair of courses from the following list:

- History 120 and History 121 or 124 or 128 or 171 or Political Science 121 or 151 or Social Science 111 or 220;
- History 121 and History 120 or 127 or Political Science 121 or Social Science 111 or 115 or 120 or 220;
- History 124 and History 120 or 127 or Social Science 120
- History 125 and Political Science 121 or Social Science 111 or 220;
- History 126 and Political Science 121 or Social Science 111 or 220;
- History 127 and History 121 or 124 or 128 or 171 or Political Science 121 or 151 or Social Science 111 or 220;
- History 128 and History 120 or 127 or Political Science 121 or Social Science 111 or 115 or 120 or 220;
- History 129 and Political Science 121 or Social Science 111 or 220;
- History 130 and Political Science 121 or Social Science 111 or 220;
- History 170 and History 171 or Political Science 121 or Social Science 111 or 220;
- History 171 and History 120 or 127 or 170 or Political Science 121 or Social Science 111 or 115 or 120 or 220;
- Political Science 121 and History 120 or 121 or 125 or 126 or 127 or 128 or 129 or 130 or 170 or 171 or Social Science 120;
- Political Science 151 and History 120 or 127 or Social Science 120;
Social Science 111 and History 120 or 121 or 125 or 126 or 127 or 128 or 129 or 130 or 170 or 171 or Social Science 120;
Social Science 115 and History 121 or 128 or 171;
Social Science 120 and History 121 or 124 or 128 or 171 or Political Science 121 or 151 or Social Science 111 or 220;
Social Science 220 and History 120 or 121 or 125 or 126 or 127 or 128 or 129 or 130 or 170 or 171 or Social Science 120
(U.S. History, Constitution and American Ideals is considered by CSU to be a statutory rather than a general education requirement.)

* Course may be listed in more than one area, but shall not be certified in more than one area except for courses in Languages other than English.
+ Indicates that transfer credit may be limited by either UC or CSU or both. Please consult with a counselor for additional information.

Note: Advanced placement exams - Acceptable scores of 3 or higher can be used in some areas towards meeting IGETC subject areas as noted in that section. Note that an acceptable score on an English exam may not be used to meet the Critical Thinking - English Composition requirement.

DVC General education requirements
(Note: changes are underlined, deletions are indicated by strike-through.)

These are the 2008-2009 DVC G.E. requirements and are subject to change. Please check with the counseling department for up-to-date information or visit www.dvc.edu.

AP tests may be listed in more than one area, but may be used to satisfy only one subject requirement.

I. Language and reasoning

A. English composition
Course requirement - 3 units
Complete with a "C" grade or higher:
English 122
AP English Language and Composition or English Literature and Composition with a score of 3 or higher meets this requirement.

B. Communications and analytical thinking
Course requirement - 3-4 units
Complete one course from:
Business 240, 250, 255
Computer Science 100, 110, 255, 265
English 123, 126
History 122
Mathematics 124, 125, 135, 135SP (3 units), 142, 181, 182, 183, 191, 192, 193, 194, 195, 292, 294
Philosophy 130
Psychology 145
Sociology 122
Speech 121
AP Mathematics Calculus AB or Calculus BC or Statistics with a score of 3 or higher meets this requirement.

C. Mathematics comprehension
Course requirement - 0-4 units
Satisfy either 1) or 2) below.
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.
   Business 240
   Engineering 111
   Mathematics 110, 110SP (4 units), 114, 120, 120SP (4 units), 121, 124, 125, 135, 135SP (3 units), 142, 181, 182, 183, 191, 192, 193, 194, 195, 292, 294
2) Satisfy one of the following:
   • Receive a "C" grade or higher in the second term of a two-term course in high school algebra.
   • Score at least 400 on the SAT Math test.
   • Score 22 or above on the math section of the ACT test.
   • Pass any of the CLEP math exams.
   • Score 3 or higher AP Math Calculus AB or Calculus BC or Statistics.

Note: Students are responsible for notifying the Admissions and Records Office if the requirement is met by submitting the proper documents.

II. Natural sciences
Course requirement - 3-5 units
Complete one course from:
Astronomy 110, 120, 128
Biological Science 101, 102, 116, 117, 130
Chemistry 106, 108, 109, 120
Geography 120, 140
Geology 120, 121, 125
Oceanography 101, 102
Physical Science 112
Physics 110, 113, 120, 121, 129, 130
One of the following AP tests with a score of 3 or higher meets this requirement; Biology; Chemistry; Environmental Science; Physics B; Physics C.
III. Arts and humanities

Course requirement - 3-4 units
Complete one course from:
Architecture 155, 160
Art 156, 160
Art Digital Media 214
Art History 193, 195, 196, 197, 199
Broadcast Communication Arts 140, 260
Dance 201
Drama 140, 141, 142, 170, 180, 181
English 150, 152, 154, 162, 163, 164, 166, 167, 168, 170, 172, 173, 175, 177, 180, 190, 252, 253, 262, 263, 272, 273
Film 140, 160, 180
Music Literature 110, 112, 113, 114, 115, 116, 117, 118
One of the following AP tests with a score of 3 or higher meets this requirement: Art History; Chinese Language and Culture; English Literature; European History; French Language; French Literature; German Language; Italian Language and Culture; Latin Literature; Latin; Vergil; Spanish Language; Spanish Literature; U.S. History; World History.

IV. Social and behavioral sciences

Course requirement - 6 units
Complete one course from Section A AND one course with a different prefix from Section B:

Section A
Political Science 121* or Social Science 111*

Section B
Administration of Justice 120*
Anthropology 120, 125, 130, 135, 150
Early Childhood Education 124, 130, 144
Economics 101, 200, 220, 221
Geography 130
History 120, 121, 124, 125, 126, 127, 128, 129, 130, 135, 136, 140, 141, 150, 151, 170, 171
Political Science 120, 121, 151, 220, 240, 250
Psychology 122, 130, 140, 141, 145, 160, 190, 210, 215, 220, 225, 290, 295
Social Science 110, 111, 115, 120, 123, 125, 160A, 162, 163, 220
Sociology 120, 121, 122, 123, 124, 125, 131, 135, 140

or
Complete one of a pair of courses from Section C:

Section C
History 120** and History 121**
History 127** and History 128**
History 170** and History 171**
Social Science 120** and Social Science 221**
*Meet's the district's American Institutions requirement as a single course.

V. Physiological and psychological studies

A. Ecology of human health
Course requirement - 3 units
Complete one course from:
Health Science 124, 140, 170
Nutrition 115, 160

Note: The course requirement may be waived for certain health science majors. When waived for religious purposes, the student must substitute a nutrition or biological science course other than one used to meet the basic science requirements. Affiliation with a religion which denies physical causes of diseases must be verified through the Admissions and Records Office.

B. Interpersonal relationships
Course requirement - 3 units
Complete one course from:
Psychology 122, 140, 141, 160

C. Physical education
Course requirement - 2 units
(Courses may vary in units.)
Complete one or more of the following physical education courses: activity, adaptive, combative, dance, or intercollegiate athletics courses to meet the PE requirement.

Note: Physical education theory courses may not be used.

VI. Multicultural studies

Course requirement - 0-3 units
*(Asterisked courses listed below also appear in categories I through V. They may simultaneously fulfill two requirements. However, the units are only counted once.)
Addiction Studies 155
Administration of Justice 130
Anthropology 120*, 135*
Broadcast Communication Arts 260*
Culinary Arts 228
Drama 142*
Early Childhood Education 144
English 162*, 168*, 170*, 173*, 177*, 190*, 225, 262*
Film 160*
Geography 135
History 124*, 125*, 126*, 127*, 128*, 129*, 130*, 170*, 171*
Humanities 115*
Music Literature 112*, 114*, 115*, 116*
Psychology 140*, 141*
Social Science 115*, 120*, 220*
Sociology 125*, 131*, 135*

VII. Information literacy

Course requirement 0-1 unit
Complete course:
Biological Science 130
Career 110
Dental Hygiene 134
Health Science 124
Library Studies 121
Nutrition 120
Physical Education Theory 210

Total general education units = 26-38
Total units required for AA/AS degree = 60

II. Changes to degree and certificate programs

New degree and certificate programs

(Note: changes are underlined, deletions are indicated by strike-through.)

Alternate energy technologies – AET

Associate in science degree
Photovoltaic systems

Certificate of achievement
Photovoltaic systems

Associate in science - Photovoltaic Systems

NOTE: This degree program is offered pending approval from the State Chancellor’s Office. Please verify the accuracy of the program requirements with a DVC counselor.

This program prepares students for jobs installing, designing, servicing and maintenance of photovoltaic systems. Students from this program will be able to work with residential, commercial and industrial size photovoltaic systems. Many of the skills learned in these courses relate to solar thermal systems as well. The following courses are part of the Electricians Trainee Program and approved by the Division of Apprenticeship Standards: Electricity 120, 121, 266, 267.

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 degree, students must complete each course used to meet a major requirement with a “C” grade or better and maintain an overall GPA of 2.5 or better in the coursework required for the major.

general education requirements ............................................26-38

major requirements .................................................. units
AET 130 Photovoltaic Systems Design and Installation .................................................. 2
AET 230 Advanced Photovoltaic Systems .................................................. 2
CONST 110 Occupational Safety .................................................. 2
CONST 114 Blueprint Reading .................................................. 2
CONST 135 Construction Processes (Residential) .................................................. 4
ELECT 120 Direct Current Circuits .................................................. 4
ELECT 121 Alternating Current Circuits .................................................. 4
ELECT 266 Electrical Codes: Articles 90-398 .................................................. 3
ELECT 267 Electrical Codes: Articles 400-830 .................................................. 3

Archived
Certificate of Achievement - Photovoltaic Systems

NOTE: This certificate program is offered pending approval from the State Chancellor's Office. Please verify the accuracy of the program requirements with a DVC counselor.

This program prepares students for jobs installing, designing, servicing and maintenance of photovoltaic systems. Students from this program will be able to work with residential, commercial and industrial size photovoltaic systems. Many of the skills learned in these courses relate to solar thermal systems as well. The following courses are part of the Electricians Trainee Program and approved by the Division of Apprenticeship Standards: Electricity 120, 121, 266, 267.

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 a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or better and maintain an overall GPA of 2.5 or better in the coursework required for the certificate.

AET 130 Photovoltaic Systems Design and Installation ........................................... 2
AET 230 Advanced Photovoltaic Systems .................................................. 2
CONST 110 Occupational Safety ......................................................... 2
CONST 114 Blueprint Reading ......................................................... 2
CONST 135 Construction Processes (Residential) .................................. 4
ELECT 120 Direct Current Circuits .................................................. 4
ELECT 121 Alternating Current Circuits ............................................... 4
ELECT 266 Electrical Codes: Articles 60-398 ...................................... 3
ELECT 267 Electrical Codes: Articles 400-830 .................................. 3

recommended courses

CNT 103 Voice, Video and Network Cabling............................... 1
CNT 105 Computer Networking Hardware/Software.... 3
COMTC 110 Introduction to Computer Hardware/ Software ........................................... 4
ELECT 130 Motors and Motor Controllers ................................. 4

Total units required 26

electives

units from a selection of degree applicable courses 0-4

Total units for the degree 60

Associate in science degree

Architecture design

Associate in science degree - Architecture design

NOTE: This degree program is offered pending approval from the State Chancellor's Office. Please verify the accuracy of the program requirements with a DVC counselor.

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.

A graduate with an architecture design degree may be employed doing residential design, architectural rendering, or tasks in an architectural office. Graduates may also wish to continue their training by transferring to an outside institution. Students who are interested in pursuing a bachelor's degree in architecture are advised to begin their studies with this degree. Earning this degree may facilitate the students transfer to a four year college and or/professional program.

Students must earn a grade of “C” or better in all applicable course work and maintain an overall GPA of 2.75 or better. Many upper level architecture degree programs require specific physics, math and general education preparation. Please consult the transfer institution for required courses. 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 a major and a DVC general education requirement; however the units are only counted once.

general education requirements 26-38

major requirements

units

ARCHI 120 Introduction to Architecture and Environmental Design .................................................. 3
ARCHI 121 Architectural Design I .................................................. 4
ARCHI 130 Architectural Graphics I .................................................. 3
ARCHI 131 Architectural Graphics II .............................................. 4
ARCHI 220 Architectural Design II .................................................. 3
ARCHI 221 Architectural Design III .................................................. 3
ARCHI 222 Architectural Working Drawings I .................................. 3
CONST 144 Materials of Construction .................................................. 3

plus at least 3 units from:

ARCHI 155 History of Architecture: Europe and World ............ 3
ARCHI 160 History of American Architecture .......................... 3

Total units for the major 29

electives

units from a selection of degree applicable courses 0-4

Total units for the degree 60
Associate in science degree - Architecture Technology

**NOTE:** This degree program is offered pending approval from the State Chancellor's Office. Please verify the accuracy of the program requirements with a DVC counselor.

The DVC architecture technology degree program offers students the opportunity to earn an associate in science degree in architecture technology, which prepares students for a career as an architectural intern, draftsperson or designer. 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, draftspersons 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 with a major in architecture technology, students must complete each course used to meet a major requirement with a “C” or better. Major requirements are available in the day and some are also offered in the evening. General education courses are available in the day or evening. Certain courses may satisfy both a major and a DVC general education requirement; however, the units are only counted once.

### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total units for the degree</td>
<td>60</td>
</tr>
</tbody>
</table>

### Major Requirements

<table>
<thead>
<tr>
<th>Course</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 126 Architectural Graphics I AutoCAD</td>
<td>4</td>
</tr>
<tr>
<td>ARCHI 130 Architectural Graphics II</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI 222 Architectural Working Drawings I</td>
<td>3</td>
</tr>
<tr>
<td>CONST 116 Surveying Related to Construction</td>
<td>2</td>
</tr>
<tr>
<td>CONSTRAINT 181 Building Code Interpretation: Non Structural</td>
<td>3</td>
</tr>
<tr>
<td>CONST 183 Title 24: Energy Conservation/Handicap</td>
<td>3</td>
</tr>
<tr>
<td>CONST 135 Construction Processes (Residential)</td>
<td>4</td>
</tr>
<tr>
<td>CONST 144 Materials of Construction</td>
<td>3</td>
</tr>
<tr>
<td>plus at least 6 units from</td>
<td></td>
</tr>
<tr>
<td>ARCHI 131 Architectural Graphics II</td>
<td>4</td>
</tr>
<tr>
<td>CONST 116 Surveying Related to Construction</td>
<td>2</td>
</tr>
<tr>
<td>CONSTRAINT 181 Building Code Interpretation: Non Structural</td>
<td>3</td>
</tr>
<tr>
<td>CONST 183 Title 24: Energy Conservation/Handicap</td>
<td>3</td>
</tr>
<tr>
<td>COOP 170 Internship in Occupational Work Experience</td>
<td>2</td>
</tr>
<tr>
<td>ENGIN 226 Computer Aided Drafting Design, Advanced Concepts-AutoCAD</td>
<td>4</td>
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<tr>
<td>Total units for the major</td>
<td>29</td>
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</tbody>
</table>

### Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>plus a selection of degree applicable courses</td>
<td>0-4</td>
</tr>
</tbody>
</table>

### Total units for the degree

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total units for the degree</td>
<td>60</td>
</tr>
</tbody>
</table>

Certificates of achievement

- **Core**
  - Web Technology
  - Web Graphics
  - Database Management
  - Project Management

Certificates of accomplishment

- **Web Technology**
- **Web Graphics**
- **Database Management**
- **Project Management**

Associate in science - Computer Information Systems

**NOTE:** These programs are offered pending approval from the State Chancellor’s Office. Please verify the accuracy of the program requirements with a DVC counselor.

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.

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, complete 26 to 38 units of general education requirements as listed in the Diablo Valley College catalog at the time of entry into the degree program, plus electives to total a minimum of 60 units. Courses numbered below 100 cannot be used to satisfy degree requirements. To earn a degree, students must complete each course used to meet a major requirement with a “C” grade or better and maintain an overall GPA of 2.5 or better in the coursework required for the major. Other electives and course substitutions not listed below are possible with department chairperson approval.

### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total units for the degree</td>
<td>26-38</td>
</tr>
</tbody>
</table>

### Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cores</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 118 Microsoft PowerPoint - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>plus a minimum of 2 units from</td>
<td></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>
</tbody>
</table>
Choose one of the following four technical specialization areas:

**Web Technology - required courses**
- CIS 105 Introduction to Web Design: 2
- CIS 106 Adobe Dreamweaver - Comprehensive: 2
- CIS 107 Web Database with Dreamweaver: 2

**Web Technology - recommended electives**
- CIS 117 Microsoft Access - Comprehensive: 2
- CIS 160 Introduction to MySQL: 2
- COMSC 095 WWW Publishing with HTML: 1

**Database Management - required courses**
- CIS 107 Web Database with Dreamweaver: 2
- CIS 117 Microsoft Access - Comprehensive: 2
- CIS 160 Introduction to MySQL: 2

**Database Management - recommended electives**
- CNT 134 Microsoft Internet Security and Acceleration (ISA) Server: 2
- CNT 135 Programming a Microsoft SQL Server Database: 3

**Project Management - required courses**
- CIS 180 Introduction to Project Management: 2
- CIS 181 Project Management Fundamentals: 2
- CIS 182 PMI PMP Prep: 3

**Project Management - recommended electives**
- CIS 185 Microsoft Project: 2
- CIS 186 Microsoft Visio: 2

**Electives**
- units from a selection of degree applicable courses: 4-16

**Total units for major**: 18

**Total units for the degree**: 60

---

**Certificate of achievement - Computer information systems - core**

**required courses**
- CIS 117 Microsoft Access - Comprehensive: 2
- CIS 119 Microsoft Excel - Comprehensive: 2
- CIS 118 Microsoft PowerPoint - Comprehensive: 2

**plus a minimum of 2 units from**
- CIS 100 Microsoft Windows - Comprehensive: 2
- CIS 101 Apple Mac Operating System: 2

**Certificate of achievement - Computer information systems - core**

**plus a minimum of 4 units from**
- CIS 117 Microsoft Access - Comprehensive: 2
- CIS 119 Microsoft Excel - Comprehensive: 2
- CIS 138 Using Visual Basic for Applications: 2

**Certificate of achievement - Computer information systems - web technology**

**required courses**
- CIS 105 Introduction to Web Design: 2
- CIS 106 Adobe Dreamweaver - Comprehensive: 2
- CIS 107 Web Database with Dreamweaver: 2

**plus a minimum of 2 units from**
- CIS 117 Microsoft Access - Comprehensive: 2
- CIS 119 Microsoft Excel - Comprehensive: 2
- COMSC 138 Using Visual Basic for Applications: 2

**plus a minimum of 4 units from**
- CIS 117 Microsoft Access - Comprehensive: 2
- CIS 119 Microsoft Excel - Comprehensive: 2
- COMSC 138 Using Visual Basic for Applications: 2

**Certificate of achievement - Computer information systems - web graphics**

**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 131 Adobe Flash - Comprehensive: 2
- CIS 132 Adobe Premiere Elements - Comprehensive: 2

**plus a minimum of 2 units from**
- CIS 100 Microsoft Windows - Comprehensive: 2
- CIS 101 Apple Mac Operating System: 2
- CIS 133 Using Camtasia: 1
- CIS 134 Using Apple iLife: 2
- CIS 135 Podcasting: 1

**Certificate of achievement units**: 18

**Certificate of achievement units**: 18
Certificate of achievement - Computer information system - database management

required courses
CIS 107  Web Database with Dreamweaver .................. 2
CIS 115  Microsoft Word - Comprehensive .................... 2
CIS 116  Microsoft Excel - Comprehensive .................... 2
CIS 117  Microsoft Access - Comprehensive .................... 2
CIS 118  Microsoft PowerPoint - Comprehensive ................ 2
CIS 160  Introduction to MySQL ................................. 2

plus a minimum of 2 units from:
CIS 100  Microsoft Windows - Comprehensive ............. 2
CIS 101  Apple Mac Operating System .......................... 2

plus a minimum of 4 units from:
CIS 117  Microsoft Access - Comprehensive .................... 2
CIS 119  Microsoft Outlook - Comprehensive ................... 2
COMSC 138  Using Visual Basic for Applications ............. 2

Certificate of achievement units 18

Database management - recommended electives
CNT 134  Microsoft Internet Security and Acceleration (ISA) Server .................................................. 3
CNT 135  Programming a Microsoft SQL Server Database .................................................................. 3

Certificate of achievement - Computer information systems - 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/ CAPM Prep ...................................................... 3
CIS 181  Project Management Fundamentals/ PMI PMP Prep .................................................. 3

plus a minimum of 2 units from:
CIS 100  Microsoft Windows - Comprehensive ............. 2
CIS 101  Apple Mac Operating System .......................... 2

plus a minimum of 4 units from:
CIS 117  Microsoft Access - Comprehensive .................... 2
CIS 119  Microsoft Outlook - Comprehensive ................... 2
COMSC 138  Using Visual Basic for Applications ............. 2

Certificate of achievement units 18

Project management - recommended electives
CIS 185  Microsoft Project ........................................... 2
CIS 186  Microsoft Visio ............................................... 2

Certificate of accomplishment - Computer information systems - web technology

required courses
CIS 105  Introduction to Web Design ............................. 2
CIS 106  Adobe Dreamweaver - Comprehensive ............ 2
CIS 107  Web Database with Dreamweaver .................. 2

Certificate of accomplishment units 6

Web technology - recommended electives
CIS 117  Microsoft Access - Comprehensive .................... 2
CIS 160  Introduction to MySQL ..................................... 2
COMSC 095  WWW Publishing with HTML .................... 1

Certificate of accomplishment - Computer information systems - web graphics

required courses
CIS 130  Adobe Photoshop Elements ............................ 2
CIS 131  Adobe Flash - Comprehensive ........................ 2
CIS 132  Adobe Premiere Elements - Comprehensive .......... 2

Certificate of accomplishment units 6

Web graphics - recommended electives
CIS 133  Using Camtasia .............................................. 1
CIS 134  Using Apple Life ............................................. 2
CIS 135  Podcasting .................................................... 1

Certificate of accomplishment - Computer information systems - database management

required courses
CIS 117  Microsoft Access - Comprehensive .................... 2
CIS 118  Microsoft PowerPoint - Comprehensive ................ 2
CIS 160  Introduction to MySQL ................................. 2

plus a minimum of 2 units from:
CNT 134  Microsoft Internet Security and Acceleration (ISA) Server .................................................. 3
CNT 135  Programming a Microsoft SQL Server Database .................................................................. 3

Certificate of accomplishment units 6

Database management - recommended electives
CNT 134  Microsoft Internet Security and Acceleration (ISA) Server .................................................. 3
CNT 135  Programming a Microsoft SQL Server Database .................................................................. 3

Certificate of accomplishment - Computer information systems - project management

required courses
CIS 180  Introduction to Project Management/ CAPM Prep ...................................................... 3
CIS 181  Project Management Fundamentals/ PMI PMP Prep .................................................. 3

Certificate of accomplishment units 6

Project management - recommended electives
CIS 185  Microsoft Project ........................................... 2
CIS 186  Microsoft Visio ............................................... 2

Certificate of accomplishment - Computer information systems - web graphics

required courses
CIS 130  Adobe Photoshop Elements ............................ 2
CIS 131  Adobe Flash - Comprehensive ........................ 2
CIS 132  Adobe Premiere Elements - Comprehensive .......... 2

Certificate of accomplishment units 6

Web graphics - recommended electives
CIS 133  Using Camtasia .............................................. 1
CIS 134  Using Apple Life ............................................. 2
CIS 135  Podcasting .................................................... 1

Certificate of accomplishment - Computer information systems - database management

required courses
CIS 117  Microsoft Access - Comprehensive .................... 2
CIS 118  Microsoft PowerPoint - Comprehensive ................ 2
CIS 160  Introduction to MySQL ................................. 2

plus a minimum of 2 units from:
CNT 134  Microsoft Internet Security and Acceleration (ISA) Server .................................................. 3
CNT 135  Programming a Microsoft SQL Server Database .................................................................. 3

Certificate of accomplishment units 6

Database management - recommended electives
CNT 134  Microsoft Internet Security and Acceleration (ISA) Server .................................................. 3
CNT 135  Programming a Microsoft SQL Server Database .................................................................. 3

Certificate of accomplishment - Computer information systems - project management

required courses
CIS 180  Introduction to Project Management/ CAPM Prep ...................................................... 3
CIS 181  Project Management Fundamentals/ PMI PMP Prep .................................................. 3

Certificate of accomplishment units 6

Project management - recommended electives
CIS 185  Microsoft Project ........................................... 2
CIS 186  Microsoft Visio ............................................... 2

Certificate of accomplishment - Computer information systems - web technology

required courses
CIS 105  Introduction to Web Design ............................. 2
CIS 106  Adobe Dreamweaver - Comprehensive ............ 2
CIS 107  Web Database with Dreamweaver .................. 2

Certificate of accomplishment units 6
Early childhood education – ECE

Associate in science degree in letters and science with an area of emphasis:

Early childhood education

Associate in science degree in letters and science with an area of emphasis - Early childhood education

NOTE: This degree program is offered pending approval from the State Chancellor's Office. Please verify the accuracy of the program requirements with a DVC counselor.

The associate in science degree with an emphasis in early childhood education is designed as a two-year curricular pathway that offers students a broad general education while integrating introductory courses in child development and principles and practices in early care and education. The associate degree curriculum offers a broad general education, meets lower division requirements for many transfer university bachelor's degree programs in early childhood education, child and human development and prepares students for various careers working directly with children, families and other adults in the early childhood profession.

This associate degree with an emphasis in early childhood education can also provide preparation for transfer to a four-year institution. Transfer and graduate studies in early childhood education, education, child psychology and human development can lead to careers in the fields of early childhood education, elementary education, child welfare, college professors, scientific researchers, and administration.

All courses counted for the area of emphasis must be completed with a “C” grade or better. Certain courses may satisfy both an area of emphasis and a DVC general education requirement; however, the units are only counted once toward the 60 unit requirement for the 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.

*general education requirements*.................................................26-38

*area of emphasis requirements* .................................................18

ECE 124 Child Development and Psychology ................................. 3
ECE 125 Introduction to Early Childhood Education ....................... 3
ECE 126 Curriculum Development for Young Children .................... 3
ECE 127 Child, Family and Community ......................................... 3

plus 6 units from:

ECE 128 Health, Safety and Nutrition for the Young Child .................. 3
ECE 129 Dealing with Difficult and Aggressive Young Children ............. 3
ECE 140 Creative Activities for Young Children ............................... 3
ECE 144 Diversity in Early Childhood Education .............................. 3
ECE 230 Infant and Toddler Care ................................................ 3
ECE 231 Infants and Toddlers: Issues and Application ........................ 3

Total units for area of emphasis 18

plus 6 units from a selection of degree applicable courses ..................4-19

Total units for degree 60

Electricity/Electronics – ELECT

Associate in science - Electricity/Electronics

NOTE: This degree program is offered pending approval from the State Chancellor's Office. Please verify the accuracy of the program requirements with a DVC counselor.

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: Electricity 120, 121, 271, 266, 267, Electronics 102B and CNT 103.

Selected courses may meet some of the lower division requirement 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 electricity/electronics, students must complete each course used to meet a major requirement with a “C” or better and maintain an overall GPA of 2.5 or better in the coursework required for the major. Certain courses may satisfy both a major and a DVC general education requirement; however, the units are only counted once.

*general education requirements*.................................................26-38

*major requirements* ...............................................................7

ELECT 120 Direct Current Circuits ............................................... 4
ELECT 121 Alternating Current Circuits ....................................... 4
ELECT 130 Motors and Motor Controllers ..................................... 4
ELECT 266 Electrical Codes: Articles 90-398 .................................. 3
ELECT 267 Electrical Codes: Articles 400-830 ................................ 3
ELECT 271 Programmable Logic Controllers .................................. 4
ELTRN 102B Linear Circuits......................................................... 4
possible career opportunities
Career options that are available through the study of English include: advertising copywriter, 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.

Associate in arts - English
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. DVC English majors must consult with a program advisor or counselor to ensure that the requirements for transfer to appropriate institutions of their choice are met.

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" or better and maintain an overall GPA of 2.5 or better in the coursework required for the major. Certain courses may satisfy both a major and a DVC general education requirement; however, the units are only counted once.

general education requirements ........................................26-38
major requirements units

Group 1: Core reading and composition courses
complete a minimum of 6 units from
ENGL 122* Freshman English: Composition and
Reading .................................................................3
ENGL 123* Critical Thinking: Composition and
Literature ..................................................................3
ENGL 126* Critical Thinking: The Shaping of Meaning
in Language ..........................................................3

Group 2: Core genre
complete a minimum of 3 units from
ENGL 150 Introduction to Literature ................................3
ENGL 151 The Short Story ..........................................3
ENGL 153 Contemporary Poetry ..................................3
ENGL 180** Literature of the Drama ............................3

Group 3: Core survey
complete a minimum of 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 ......................3

Group 4: electives - Specialized literature and writing
complete a minimum of 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 165 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 Introduction to Gay and Lesbian Multicultural
Voices in Literature ................................................3
ENGL 175 Science Fiction and Fantasy 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* Writing about Cultural Identity in America ....3

Total units for the major 21

electives
units from a selection of degree applicable courses ..........3-12
Total units for degree 60

*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 science in letters and science with an area of emphasis:**

- Meteorology
- Physical Geography

**Associate in art in letters and science with an area of emphasis:**

- Social/Cultural Geography

**Associate in science degree**

Geographic information systems/Global positioning system

**Associate in science in letters and science with an area of emphasis - Meteorology**

*NOTE: This degree program is offered pending approval from the State Chancellor’s Office. Please verify the accuracy of the program requirements with a DVC counselor.*

The area of emphasis in meteorology provides students with a basic understanding of the discipline and the background necessary to understand meteorology as an applied science. In addition, it prepares students to transfer and continue their studies in meteorology.

All courses counted for the area of emphasis must be completed with a “C” grade or better. Certain courses may satisfy both an area of emphasis and a DVC general education requirement; however, the units are only counted once toward the 60 unit requirement for the 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.

**General Education Requirements**

- 26-38 units

**Area of Emphasis Requirements**

- 18 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 120 Introduction to Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 121 Physical Geography Lab</td>
<td>1</td>
</tr>
<tr>
<td>GEOG 135 World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 140 Introduction to Weather</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 141 Weather Lab</td>
<td>1</td>
</tr>
<tr>
<td>GEOG 142 Maps and Cartography</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 120 General College Physics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total units for area of emphasis** 18

**Electives**

- 4-19 units from a selection of degree applicable courses

**Total units for degree** 60

**Associate in art in letters and science with an area of emphasis - Social/Cultural Geography**

*NOTE: This degree program is offered pending approval from the State Chancellor’s Office. Please verify the accuracy of the program requirements with a DVC counselor.*

The area of emphasis in social-cultural geography provides the student with a well-rounded exposure to a broad spectrum of courses related to social-cultural geography. Students will be prepared to transfer and continue their studies in social-cultural geography.

All courses counted for the area of emphasis must be completed with a “C” grade or better. Certain courses may satisfy both an area of emphasis and a DVC general education requirement; however, the units are only counted once toward the 60 unit requirement for the 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.

**General Education Requirements**

- 26-38 units

**Area of Emphasis Requirements**

- 18 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOSC 126 Nature Study and Conservation</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 125 Introduction to Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 127 Introduction to Global Positioning Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 120 Introduction to Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 122 Physical Geology Lab</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 125 Geology of California</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total units for area of emphasis** 18

**Electives**

- 4-19 units from a selection of degree applicable courses

**Total units for degree** 60
Health science – HSCI

**Associate in science in letters and science with an area of emphasis in Behavioral Health**

*NOTE: This degree program is offered pending approval from the State Chancellor’s Office. Please verify the accuracy of the program requirements with a DVC counselor.*

Students wishing to pursue a career in the field of public health education should consider this two year program. The courses in this program emphasize a multi-dimensional approach to health that incorporate the study of social, behavioral, and physiological sciences, and practical work experience. Students will learn about risk factors for disease and disability and be taught behavior changing skills, which will prepare a student for work experience as a health educator in an academic, community, and/or medical field and will also provide a foundation in the health sciences field for those students who want to continue to a 4-year institution.

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

**general education requirements..............................................26-38**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 120 Introduction to Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 130 Cultural Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 135 World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 162 Maps and Cartography</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 130 Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>SOCIO 131 The Urban Community</td>
<td>3</td>
</tr>
</tbody>
</table>

**HUMAN 105 Introduction to Humanities: Arts and Ideas** | 3
**HUMAN 110 Introduction to Humanities: Ancient Civilizations (to 500 A.D.)** | 3
**HUMAN 111 Introduction to Humanities: Middle Ages and Renaissance (500 A.D. – 1700 A.D.)** | 3
**HUMAN 112 Introduction to Humanities: The Modern World (1700-present) ** | 3
**HUMAN 115 Introduction to Humanities: The American Multicultural Experience** | 3
**HUMAN 116 The Arts and Culture of Asia** | 3
**HUMAN 118 Film, Fiction, and Criticism** | 3
**HUMAN 120 Introduction to Humanities: The African American Experience** | 3
**HUMAN 123 American Popular Culture** | 3

**Area of emphasis requirements...........................................18**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSCI 128 Stress Management and Health</td>
<td>3</td>
</tr>
<tr>
<td>HSCI 164 Mind Body Healing</td>
<td>3</td>
</tr>
<tr>
<td>HSCI 170 Women’s Health</td>
<td>3</td>
</tr>
<tr>
<td>HSCI 230 Advanced First Aid/CPR</td>
<td>3</td>
</tr>
<tr>
<td>NUTRI 120 Sports Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUTRI 160 Nutrition: Science and Application</td>
<td>3</td>
</tr>
<tr>
<td>LS 121 Information Competency and Research</td>
<td>1</td>
</tr>
<tr>
<td>ADS 101 Introduction to Substance Abuse and Treatment</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 115 Resiliency and Student Success</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total units for area of emphasis** | **24**

**Electives**

units from a selection of degree applicable courses .................4-19

**Total units for the degree** | **60**

**Humanities – HUMAN**

**Associate in arts in letters and science with an area of emphasis in Humanities**

*NOTE: This degree program is offered pending approval from the State Chancellor’s Office. Please verify the accuracy of the program requirements with a DVC counselor.*

The humanities area of emphasis is comprised of courses that integrate the different arts: music, dance, visual arts, architecture, literature, drama, philosophy, and history. The area of emphasis provides a well rounded and rich background in the creative and intellectual expression of major world civilizations, intellectual and cultural movements, and individual works of creative expression. Humanities students develop skills in artistic analysis, aesthetic judgments, 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.

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

**general education requirements..............................................26-38**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMAN 105 Introduction to Humanities: Arts and Ideas</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 108 The Roots of Hell</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 110 Introduction to Humanities: Ancient Civilizations (to 500 A.D.)</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 111 Introduction to Humanities: Middle Ages and Renaissance (500 A.D. – 1700 A.D.)</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 112 Introduction to Humanities: The Modern World (1700-present)</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 115 Introduction to Humanities: The American Multicultural Experience</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 116 The Arts and Culture of Asia</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 118 Film, Fiction, and Criticism</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 120 Introduction to Humanities: The African American Experience</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 123 American Popular Culture</td>
<td>3</td>
</tr>
</tbody>
</table>

**Area of emphasis requirements...........................................24**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSCI 128 Stress Management and Health</td>
<td>3</td>
</tr>
<tr>
<td>HSCI 164 Mind Body Healing</td>
<td>3</td>
</tr>
<tr>
<td>HSCI 170 Women’s Health</td>
<td>3</td>
</tr>
<tr>
<td>HSCI 230 Advanced First Aid/CPR</td>
<td>3</td>
</tr>
<tr>
<td>NUTRI 120 Sports Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUTRI 160 Nutrition: Science and Application</td>
<td>3</td>
</tr>
<tr>
<td>LS 121 Information Competency and Research</td>
<td>1</td>
</tr>
<tr>
<td>ADS 101 Introduction to Substance Abuse and Treatment</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 115 Resiliency and Student Success</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total units for area of emphasis** | **24**

**Electives**

units from a selection of degree applicable courses .................0-16

**Total units for the degree** | **60**
### Political science – POLSC

#### Associate in art in letters in science with an area of emphasis - Political Science

**NOTE:** This degree program is offered pending approval from the State Chancellor’s Office. Please verify the accuracy of the program requirements with a DVC counselor.

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.

Successful completion of the area of emphasis will prepare students for transfer to a political science major, or other related fields at the university level.

All courses counted for the area of emphasis must be completed with a “C” grade or better. Certain courses may satisfy both an area of emphasis and a DVC general education requirement; however, the units are only counted once toward the 60 unit requirement for the 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.

#### General education requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 130</td>
<td>Cultural Anthropology</td>
</tr>
<tr>
<td>ECON 220</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>ECON 221</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>HIST 120</td>
<td>History of the United States before 1877</td>
</tr>
<tr>
<td>HIST 121</td>
<td>History of the United States after 1877</td>
</tr>
<tr>
<td>HIST 125</td>
<td>History of the US: A Mexican-American Perspective</td>
</tr>
<tr>
<td>HIST 127</td>
<td>African American Perspective History of US to 1865</td>
</tr>
<tr>
<td>HIST 128</td>
<td>African American Perspective History of US after 1865</td>
</tr>
<tr>
<td>HIST 129</td>
<td>History of Asian-Pacific Islanders in the United States</td>
</tr>
<tr>
<td>HIST 140</td>
<td>History of Western Civilization to Renaissance</td>
</tr>
<tr>
<td>HIST 141</td>
<td>History of Western Civilization since Renaissance</td>
</tr>
<tr>
<td>HIST 150</td>
<td>History of East Asia (to 1600)</td>
</tr>
<tr>
<td>HIST 170</td>
<td>History of Women in the United States (Pre-Colonial-1877)</td>
</tr>
</tbody>
</table>

#### Area of emphasis requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLSC 120</td>
<td>Introduction to Politics</td>
</tr>
<tr>
<td>POLSC 121</td>
<td>Introduction to United States Government</td>
</tr>
</tbody>
</table>

#### Required courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLSC 120</td>
<td>Introduction to Politics</td>
</tr>
<tr>
<td>POLSC 121</td>
<td>Introduction to United States Government</td>
</tr>
</tbody>
</table>

#### Complete 9 units from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLSC 151</td>
<td>Issues in State and Local Politics</td>
</tr>
<tr>
<td>POLSC 220</td>
<td>Comparative Politics</td>
</tr>
<tr>
<td>POLSC 240</td>
<td>Political Theory</td>
</tr>
<tr>
<td>POLSC 250</td>
<td>International Relations</td>
</tr>
</tbody>
</table>

#### Complete 3 units from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 130</td>
<td>Cultural Anthropology</td>
</tr>
<tr>
<td>ECON 220</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>ECON 221</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>HIST 120</td>
<td>History of the United States before 1877</td>
</tr>
<tr>
<td>HIST 121</td>
<td>History of the United States after 1877</td>
</tr>
<tr>
<td>HIST 125</td>
<td>History of the US: A Mexican-American Perspective</td>
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<tr>
<td>HIST 127</td>
<td>African American Perspective History of US to 1865</td>
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<tr>
<td>HIST 128</td>
<td>African American Perspective History of US after 1865</td>
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<tr>
<td>HIST 129</td>
<td>History of Asian-Pacific Islanders in the United States</td>
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<td>HIST 140</td>
<td>History of Western Civilization to Renaissance</td>
</tr>
<tr>
<td>HIST 141</td>
<td>History of Western Civilization since Renaissance</td>
</tr>
<tr>
<td>HIST 150</td>
<td>History of East Asia (to 1600)</td>
</tr>
<tr>
<td>HIST 170</td>
<td>History of Women in the United States (Pre-Colonial-1877)</td>
</tr>
</tbody>
</table>

### Total units for degree

60

### Total units for area of emphasis

18

### Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>units from a selection of degree applicable courses</td>
<td>4-22</td>
</tr>
</tbody>
</table>

### Notes

- Political science courses offer insight into events at the local, state, national, and international level.
- Successful completion of the area of emphasis will prepare students for transfer to a political science major, or other related fields at the university level.
- All courses counted for the area of emphasis must be completed with a “C” grade or better.
Psychology – PSYCH

Associate in arts in letters and science with an area of emphasis - Psychology

NOTE: This degree program is offered pending approval from the State Chancellor’s Office. Please verify the accuracy of the program requirements with a DVC counselor.

The associate degree with an area of emphasis in psychology 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 offers a broad general education, meets lower division requirements for many transfer university bachelor’s degree programs in psychology, and prepares students for entry-level positions in a variety of interpersonal careers. Associate degree graduates may assist psychologists and others in mental health centers, hospitals, child welfare agencies, correctional facilities, schools, and business settings.

Psychology includes a variety of sub-fields including clinical, counseling, developmental, forensic, social, cognitive, biological, and personality psychology. This associate degree with an emphasis in psychology can also provide preparation for transfer to a four-year institution. Transfer and graduate studies in psychology can lead to careers as psychotherapists, college professors, scientific researchers, administrators, and business consultants.

All courses counted for the area of emphasis must be completed with a “C” grade or better. Certain courses may satisfy both an area of emphasis and a DVC general education requirement; however, the units are only counted once toward the 60 unit requirement for the 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.

### general education requirements
- MATH 142 Elementary Statistics with Probability ............. 4
- SOCS 123 American Popular Culture ..................................... 3
- SOCIO 121 Introduction to Social Problems .............................. 3
- SOCIO 122 Critical Thinking About Social and Cultural Issues ................................................. 3
- *Other courses with the prefix SOCIO, HUMAN, PHILO, GEOG may be submitted for consideration and evaluation in their suitability towards the political science area of emphasis.*

**Total units for area of emphasis** 18

**electives**
- units from a selection of degree applicable courses 4-26

**Total units for degree** 60

### area of emphasis requirements

#### required courses:
- PSYCH 145 Critical Thinking in Psychology ....................... 3
- PSYCH 210 General Psychology ........................................... 3
- PSYCH 215 Research Methods in Psychology ..................... 3
- MATH 142 Elementary Statistics with Probability ............. 4

#### plus a minimum of 3 units from:
- BIOSC 101 Fundamentals of Biological Science ............... 3
- BIOSC 102 Fundamentals of Biological Science with Lab ........................................................... 4

**complete a minimum of 3 units from**

#### Area 1 (Identity and Interpersonal Relationships)
- PSYCH 122 Psychology of Modern Life .............................. 3
- PSYCH 140 Psychology of African Americans ................... 3
- PSYCH 141 Psychology of Latinos/Chicanos ..................... 3
- PSYCH 160 Psychology of Women ..................................... 3
- PSYCH 240 Transpersonal Psychology ................................ 3

#### complete a minimum of 3 units from**

#### Area 2 (Abnormality, Personality and Social Context)
- PSYCH 220 Personality Psychology ................................... 3
- PSYCH 225 Social Psychology ........................................... 3
- PSYCH 230 Abnormal Psychology ...................................... 3

#### complete a minimum of 3 units from**

#### Area 3 (Biology and Development)
- PSYCH 115 Resiliency ........................................................ 1
- PSYCH 130 Emotions, Learning and the Brain ................... 3
- PSYCH 190 Adolescent Psychology ................................... 3
- PSYCH 200 Life-Span Psychology ...................................... 3

**Total units for area of emphasis** 25-26

**Total units for degree** 60
Revisions to degree and certificate programs

(Note: changes are underlined, deletions are indicated by strike-through.)

Architecture – ARCHI

Certificate of achievement - Architecture technology

This program offers students the opportunity to earn a certificate of achievement in architecture technology, which prepares students for a career as an architectural intern, draftsman or designer. 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, and engineers.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or better. Certificate requirements are available in the evening, and some are also offered in the day.

required courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHI 120</td>
<td>Introduction to Architecture and Environmental</td>
<td>3</td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCHI 121</td>
<td>Architectural Design I</td>
<td>4</td>
</tr>
<tr>
<td>ARCHI 126</td>
<td>Computer Aided Design and Drafting</td>
<td>4</td>
</tr>
<tr>
<td>ARCHI 130</td>
<td>Architectural Graphics I</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI 131</td>
<td>Architectural Graphics II</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI 220</td>
<td>Architectural Design II</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI 221</td>
<td>Architectural Design III</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI 222</td>
<td>Architectural Working Drawings I</td>
<td>3</td>
</tr>
<tr>
<td>ARCHI 223</td>
<td>Architectural Working Drawings II</td>
<td>3</td>
</tr>
<tr>
<td>CONST 124</td>
<td>Construction Details and Specifications</td>
<td>3</td>
</tr>
<tr>
<td>CONST 135</td>
<td>Construction Processes (Residential)</td>
<td>4</td>
</tr>
<tr>
<td>CONST 144</td>
<td>Materials of Construction</td>
<td>3</td>
</tr>
<tr>
<td>CONST 273</td>
<td>Construction Management</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>[plus at least 2 units from:]</td>
<td></td>
</tr>
<tr>
<td>ARCHI 131</td>
<td>Architectural Graphics II</td>
<td>4</td>
</tr>
<tr>
<td>ARCHI 155</td>
<td>History of Architecture: Europe and World</td>
<td>3</td>
</tr>
<tr>
<td>CONST 116</td>
<td>Surveying Related to Construction</td>
<td>2</td>
</tr>
<tr>
<td>CONST 183</td>
<td>Building Code Interpretation: Non Structural</td>
<td>3</td>
</tr>
<tr>
<td>CONSTRUCTION</td>
<td>Surveying Related to Construction: Non Structural</td>
<td>3</td>
</tr>
<tr>
<td>CONSTRUCTION</td>
<td>Energy Conservation/Handicap</td>
<td>3</td>
</tr>
<tr>
<td>CONSTRUCTION</td>
<td>Internship in Occupational Work Experience</td>
<td>2-3</td>
</tr>
<tr>
<td>ENGIN 229</td>
<td>Computer Aided Drafting Design, Advanced Concepts</td>
<td>4</td>
</tr>
</tbody>
</table>

Total units required 29

Associate in arts - Art digital media

The art digital media associate in arts program prepares students for entry level employment in one of six specialty areas of the multimedia industry: character animation, digital imaging, web design, motion graphics, 3D animation and digital audio. 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 multimedia industry design and production process. Additionally, students will explore multimedia career opportunities and develop a professional digital media 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 better. Required courses are available in the evening and during the day. Certain courses may satisfy both a general education and major requirement; however, the units are only counted once.

- general education requirements 26-38
- major requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Drawing, Color, and 2D Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM 110</td>
<td>Digital Imaging Process and Technique I</td>
<td>1.5</td>
</tr>
<tr>
<td>ARTDM 111</td>
<td>Digital Imaging Process and Technique II</td>
<td>1.5</td>
</tr>
<tr>
<td>ARTDM 130</td>
<td>Introduction to Digital Audio</td>
<td>1.5</td>
</tr>
<tr>
<td>ARTDM 149</td>
<td>Introduction to Digital Video</td>
<td>1.5</td>
</tr>
<tr>
<td>ARTDM 190</td>
<td>Projects in Multimedia</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM 191</td>
<td>Multimedia Portfolio Development</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>
</tbody>
</table>

choose 8-9 units from one of the following six specialty areas:

- character animation

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 107</td>
<td>Figure Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM 165</td>
<td>Cartoon Drawing for Digital Animation</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM 170</td>
<td>Multimedia for Web Delivery</td>
<td>3</td>
</tr>
</tbody>
</table>

- digital audio

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 172</td>
<td>Introduction to Electronic Music and MIDI</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 173</td>
<td>Advanced Electronic Music</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 174</td>
<td>Introduction to ProTools</td>
<td>3</td>
</tr>
</tbody>
</table>

- digital imaging

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTDM 112</td>
<td>Digital Imaging for the Artist</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM 214</td>
<td>Introduction to Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM 115</td>
<td>Digital Imaging Process and Technique III</td>
<td>3</td>
</tr>
</tbody>
</table>

- motion graphics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTDM 140</td>
<td>Motion Graphics for Digital Media</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM 145</td>
<td>Intermediate Digital Video Production Digital</td>
<td>3</td>
</tr>
<tr>
<td>ARTDM 170</td>
<td>Multimedia for Web Delivery</td>
<td>3</td>
</tr>
</tbody>
</table>

- 3D modeling and animation

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>
To earn a certificate of achievement, students must complete a portfolio for entry into the workforce. Career opportunities and develop a professional digital media and production process. Additionally, students will explore an oriented learning experience that mirrors the industry design and technical skills needed for creating non-linear interactive motion graphics, 3D modeling and animation, and web design.

The art digital media program prepares students for entry level employment in one of six specialty areas of the multimedia industry: character animation, digital audio, digital imaging, motion graphics, 3D modeling and animation, 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 digital media 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 better. Required courses are available in the evening and during the day.
ARTDM 175 Flash Interactivity ........................................ 3
ARTDM 214 Introduction to Graphic Design .................. 3
ARTDM 224 Typography ............................................. 3
BUS 109 Introduction to Business ................................ 3
BUSMG 191 Small Business Management ..................... 3
COMSC 095 WWW Publishing with HTML .................... 1
COMSC 096 Advanced WWW Publishing .................... 1
COMSC 255 Programming with Java ........................... 3
COMSC 265 Advanced Programming with C and C++ .... 4
L 114 Developing and Managing Web Pages ................. 2
MUSIC 172 Introduction to Electronic Music and MIDI .... 3
MUSIC 173 Advanced Electronic Music ....................... 3
MUSIC 174 Introduction to ProTools ........................... 3

Total units required 32-33

Note: There may be no duplication of course units between specialty area requirements and elective courses.

Broadcast communication arts – BCA

Associate in arts degree - Broadcast communication arts

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 better. Required courses can only be completed by attending a combination of day and evening classes. Certain courses may satisfy both a major and a DVC general education requirement, 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.

major requirements

ARTDM 110 Digital Imaging Process and Technique I ........ 1.5
ARTDM 149 Introduction to Digital Video ..................... 3
ARTDM 150 Intermediate Digital Field Production .......... 3
ARTDM 160 Intermediate Digital Editing ..................... 3
ARTDM 170 Multimedia for Web Delivery .................... 3
ARTDM 171 Digital Imaging Process and Technique II ....... 1.5
ARTDM 175 Flash Interactivity .................................. 3

plus at least 3 units from:

ARTDM 175 Flash Interactivity .................................. 3
ARTDM 176 Intermediate Digital Field Production ......... 3
ARTDM 177 Advanced Digital Video Production .......... 3
ARTDM 178 Digital Video Editing ............................. 3

Total units for the major 31.5

electives

plus at least 3 units from:

ARTDM 190 Topics in Broadcast Communication Arts ....... 3
ARTDM 195 Applied Production for Digital Media ......... 3
COMSC 095 WWW Publishing with HTML .................. 1
COMSC 096 Advanced WWW Publishing .................... 1

plus at least 6 units from:

ARTDM 110 Digital Imaging Process and Technique I .... 1.5
ARTDM 115 Digital Imaging Process and Technique II .... 3
ARTDM 149 Introduction to Digital Video ................... 3
ARTDM 150 Intermediate Digital Field Production ....... 3
ARTDM 160 Intermediate Digital Editing .................... 3
ARTDM 170 Multimedia for Web Delivery .................... 3
ARTDM 171 Digital Imaging Process and Technique II .... 1.5
ARTDM 175 Flash Interactivity .................................. 3

plus at least 3 units from:

BCA 100 Introduction to Radio Production ................. 3
BCA 125 Intermediate Digital Field Production .......... 3
BCA 132 Advanced TV Studio Production .................... 3
BCA 150 Music Video Production ............................. 3

Total units for the degree 60-63.5

Certificate of achievement - Broadcast communication arts

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 better. Required courses can only be completed by attending a combination of day and evening classes.

**Certificate of accomplishment - Broadcast communication arts - Basic digital field production**

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 achievement, students must complete each of the required courses with a "C" grade or better. Required courses can only be completed by attending a combination of day and evening classes.

**Certificate of accomplishment - Business essentials**

This certificate of accomplishment provides a core curriculum of business skills necessary for obtaining entry-level employment in a business or office environment. This certificate or its equivalent is required in order to complete the requirements for a certificate of achievement in the business or accounting areas.

To earn a certificate of accomplishment, students must complete the required courses with a "C" grade or better. Certificate requirements may be completed by attending a combination of day and evening, hybrid and/or online classes.

---

**Business – BUS**

---

**Total units required**

**Certificate of accomplishment - Broadcast communication arts - Basic digital field production**

**Total units required**

**Certificate of accomplishment - Business essentials**

**Total units required**
Certificate of achievement - General Accounting

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 grade of “C” or better 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. Requests for course substitution are made to the business administration department chairperson.

<table>
<thead>
<tr>
<th>required courses</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 101 Business English</td>
<td>3</td>
</tr>
<tr>
<td>BUS 103 Applied Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUSAC 185 Computer Accounting for Business I</td>
<td>1.5</td>
</tr>
<tr>
<td>BUSAC 186 Principles of Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUSAC 187 Principles of Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>BUSAC 282 Intermediate Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSIM 145 Business Spreadsheet Applications</td>
<td>2</td>
</tr>
<tr>
<td>LS 121 Information Competency and Research Skills</td>
<td>1</td>
</tr>
</tbody>
</table>

**plus at least 3 units from:**

<table>
<thead>
<tr>
<th>required courses</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 294 Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUSAC 283 Auditing</td>
<td>3</td>
</tr>
<tr>
<td>BUSAC 284 Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSAC 285 Federal Income Taxes Individuals</td>
<td>1.5</td>
</tr>
<tr>
<td>BUSAC 286 Governmental and Not for Profit Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSAC 182 Computer Income Tax Preparation-Individual</td>
<td>1.5</td>
</tr>
<tr>
<td>BUSAC 185 Computer Accounting for Business II</td>
<td>1.5</td>
</tr>
<tr>
<td>BUSAC 188 Computer Accounting for Governmental and Not For Profit Accounting</td>
<td>1.5</td>
</tr>
<tr>
<td>BUSAC 190 Payroll Accounting</td>
<td>1.5</td>
</tr>
<tr>
<td>BUS 240 Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 250 Business Communications I</td>
<td>3</td>
</tr>
<tr>
<td>COOP 170 Occupational Work Experience</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**Certificate of achievement - Microcomputer software support**

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 is 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 stand alone 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 better. Certificate requirements may only be completed by attending a combination of day and evening classes.

*Up to 11 units may be P

<table>
<thead>
<tr>
<th>required courses</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAC 186 Principles of Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 250 Business Communications I</td>
<td>3</td>
</tr>
<tr>
<td>COMSC 100 Introduction to Computers and Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>COMSC 100L Introduction to Computer Software</td>
<td>1</td>
</tr>
<tr>
<td>COMSC 110 Introduction to Programming</td>
<td>4</td>
</tr>
</tbody>
</table>

Total units required 20
plus at least 12 units from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAC 185</td>
<td>Computer Accounting for Business I</td>
<td>1.5</td>
</tr>
<tr>
<td>CNT 105</td>
<td>Computer Networking Hardware/Software</td>
<td>3</td>
</tr>
<tr>
<td>CNT 114</td>
<td>Microsoft Windows Operating System Essentials/Administration</td>
<td>3</td>
</tr>
<tr>
<td>COMSC 95</td>
<td>WWW Publishing with HTML</td>
<td>1</td>
</tr>
<tr>
<td>COMSC 96</td>
<td>Advanced WWW Publishing</td>
<td>1</td>
</tr>
<tr>
<td>COMSC 97</td>
<td>Advanced HTML - Style Sheets and DHTML</td>
<td>1</td>
</tr>
<tr>
<td>COMSC 150**</td>
<td>Topics in Computer Science</td>
<td>0.3-4</td>
</tr>
<tr>
<td>COMSC 151**</td>
<td>Topics in Operating Systems</td>
<td>0.3-4</td>
</tr>
<tr>
<td>COMSC 152**</td>
<td>Topics in Application Software</td>
<td>0.3-4</td>
</tr>
<tr>
<td>COMSC 154**</td>
<td>Topics in Programming Languages</td>
<td>0.3-4</td>
</tr>
<tr>
<td>COMSC 155**</td>
<td>Topics in Networking</td>
<td>0.3-4</td>
</tr>
<tr>
<td>COMSC 171</td>
<td>Introduction to UNIX</td>
<td>2</td>
</tr>
<tr>
<td>COMSC 245</td>
<td>Programming with Visual Basic</td>
<td>4</td>
</tr>
<tr>
<td>COMSC 255</td>
<td>Programming with Java</td>
<td>4</td>
</tr>
<tr>
<td>COMSC 265</td>
<td>Advanced Programming with C/C++</td>
<td>4</td>
</tr>
</tbody>
</table>

** Total units required 27

** Up to 4 units total may be from COMSC 150, COMSC 151, COMSC 152, COMSC 154, and COMSC 155.

Certificate of achievement - Computer technical support

This program is intended to prepare the student for jobs in business and government as computer support technicians. Principal areas of study are computer software applications, hardware, and basic network principles. Instruction will include the installation, support and repair of microcomputers, especially those attached to local area networks (LANs).

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a "C" grade or better and maintain an overall GPA of 2.5 or better in the coursework required for the certificate. Certificate requirements are available in the evening, day, and on weekends.

required courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 250</td>
<td>Business Communications I</td>
<td>3</td>
</tr>
<tr>
<td>CNT 103</td>
<td>Voice, Video and Network Cabling</td>
<td>1</td>
</tr>
<tr>
<td>CNT 105</td>
<td>Computer Networking Hardware/Software</td>
<td>3</td>
</tr>
<tr>
<td>CNT 114</td>
<td>Microsoft Windows Operating System Essentials/Administration</td>
<td>3</td>
</tr>
<tr>
<td>COMSC 100L</td>
<td>Introduction to Computer Software</td>
<td>1</td>
</tr>
<tr>
<td>COMSC 105</td>
<td>Introduction to Computer Science</td>
<td>4</td>
</tr>
<tr>
<td>COMTC 110-B</td>
<td>Introduction to Computer Hardware/Software</td>
<td>4</td>
</tr>
<tr>
<td>COMTC 118</td>
<td>Introduction to Operating Systems</td>
<td>4</td>
</tr>
<tr>
<td>COMTC 120</td>
<td>Computer Systems Troubleshooting</td>
<td>4</td>
</tr>
</tbody>
</table>

Total units required 27

Associate in science degree - Computer technical support

This two-year associate in science degree program is intended to prepare the student for jobs in business and government as computer support technicians. Principal areas of study are computer software applications, hardware, and basic network principles. Instruction will include the installation, support and repair of microcomputers, especially those attached to local area networks (LANs). To earn a degree, students must complete each course used to meet a major requirement with a "C" grade or better and maintain an overall GPA of 2.5 or better in the coursework for the major. Certain courses may satisfy both a major and a DVC general education requirement; however, the units are only counted once.

general education requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 250</td>
<td>Business Communications I</td>
<td>3</td>
</tr>
<tr>
<td>CNT 103</td>
<td>Voice, Video and Network Cabling</td>
<td>1</td>
</tr>
<tr>
<td>CNT 105</td>
<td>Computer Networking Hardware/Software</td>
<td>3</td>
</tr>
<tr>
<td>CNT 114</td>
<td>Microsoft Windows Operating System Essentials/Administration</td>
<td>3</td>
</tr>
<tr>
<td>COMSC 100L</td>
<td>Introduction to Computer Software</td>
<td>1</td>
</tr>
<tr>
<td>COMSC 105</td>
<td>Introduction to Computer Science</td>
<td>4</td>
</tr>
<tr>
<td>COMTC 110-B</td>
<td>Introduction to Computer Hardware/Software</td>
<td>4</td>
</tr>
<tr>
<td>COMTC 118</td>
<td>Introduction to Operating Systems</td>
<td>4</td>
</tr>
<tr>
<td>COMTC 120</td>
<td>Computer Systems Troubleshooting</td>
<td>4</td>
</tr>
</tbody>
</table>

Total units for the major 27

Certificate of achievement - Computer technical support

This program is intended to prepare the student for entry-level jobs as computer technicians. Typical jobs would be computer assembly, computer upgrading, and introductory computer repair with an overview of computer networking. The COMTC 110-B and COMTC 118 courses help students prepare for the "A+ computer technician" exam. The "A+ computer technician" is intended for individuals with six months or more of computer technician work experience. The A+ exam is administered by Sylvan Prometric off campus and has a fee associated with the exam. The courses listed below change frequently because of the A+ exam. The A+ exam is administered by Sylvan Prometric off campus and has a fee associated with the exam. The courses listed below change frequently because of new versions of software, so students are advised to consult with the faculty in the computer networking/computer technical support department.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a "C" grade or better and maintain an overall GPA of 2.5 or better in the coursework required for the certificate. Certificate requirements are available in the evening, day, and on weekends.

required courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMTC 110-B</td>
<td>Introduction to Computer Hardware/Software</td>
<td>4</td>
</tr>
<tr>
<td>COMTC 118</td>
<td>Introduction to Operating Systems</td>
<td>4</td>
</tr>
<tr>
<td>CNT 105</td>
<td>Computer Networking Hardware/Software</td>
<td>3</td>
</tr>
<tr>
<td>CNT 114</td>
<td>Microsoft Windows Operating System Essentials/Administration</td>
<td>3</td>
</tr>
</tbody>
</table>

Total units required 14

** Total units required 60

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Early childhood education – ECE

Associate in science degree - Early childhood education

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 course required for the major with a grade of “C” or better. Attending classes in the day, the evening or both can complete degree requirements.

units

general education requirements ......................................................... 26-38
major requirements
ECE 124 Child Development and Psychology ........................................ 3
ECE 125 Introduction to Early Childhood Education............................. 3
ECE 126 Health, Safety and Nutrition for the Young Child .................. 3
ECE 128 Curriculum Development for Young Children.......................... 3
ECE 130 Child, Family and Community ................................................ 3
ECE 144 Diversity in ECE Classroom .................................................. 3
ECE 249 Introduction to ECE Theory and Practice ................................ 4
ECE 250 ECE Theory and Practice .................................................... 4

Total units for the major 26

electives

units from a selection of degree applicable courses ................................ 0-7

Total units for the degree 60-61

recommended degree electives:

Certificate of achievement* - Early childhood education - Basic

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 better. Attending classes in the day, the evening, or both can complete certificate requirements.

required courses
ECE 124 Child Development and Psychology ........................................ 3
ECE 125 Introduction to Early Childhood Education............................. 3
ECE 126 Health, Safety and Nutrition for the Young Child .................. 3
ECE 128 Curriculum Development for Young Children.......................... 3
ECE 130 Child, Family and Community ................................................ 3
ECE 134 Topics in Family Communication and Interaction .................. 0.3-4
ECE 139 Dealing with Difficult and Aggressive Interaction .................. 3
ECE 220 Programs for the School Age Child ....................................... 3
ECE 230 Infant and Toddler Care ..................................................... 3
ECE 249 Introduction to ECE Theory and Practice ................................ 4
ECE 250 ECE Theory and Practice .................................................... 4

Total units required 20.5

*Three units are required for the certificate program.

Certificate of achievement - Early childhood education - Family day care provider/foster care provider/in-home child care provider

This program prepares students to become family day care providers and/or foster care providers and in-home child care providers. It anticipates legislative mandate of such training or licensure.

To earn a certificate of achievement, students must complete each course used to meet a certificate requirement with a “C” grade or better. Attending classes in the day, the evening or both can complete certificate requirements.

required courses
ECE 124 Child Development and Psychology ........................................ 3
ECE 126 Health, Safety and Nutrition for the Young Child .................. 3
ECE 129 Dealing with Difficult and Aggressive Young Children .............. 3
ECE 130 Child, Family and Community ................................................ 3
ECE 134 Topics in Family Communication and Interaction .................. 0.3-4
ECE 139 Dealing with Difficult and Aggressive Interaction .................. 3
ECE 220 Programs for the School Age Child ....................................... 3
ECE 230 Infant and Toddler Care ..................................................... 3
ECE 249 Introduction to ECE Theory and Practice ................................ 4
ECE 250 ECE Theory and Practice .................................................... 4
ECE 247 Issues of Foster Parenting .................................................... 1.5

Total units required 20.5

*This is an alternative certificate to the Child Development Certificates.

Certificate of achievement - Early childhood education - Master teacher

This 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 Credentiaing. 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 better. Attending classes in the day, the evening or both can complete certificate requirements.

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ARCHIVED
required courses          units
ECE 124  Child Development and Psychology ...................... 3
ECE 125  Introduction to Early Childhood Education ............ 3
ECE 126  Health, Safety and Nutrition for the Young Child ........ 3
ECE 128  Curriculum Development for Young Children ... 3
ECE 130  Child, Family and Community .......................... 3
ECE 144  Diversity in Early Childhood Education ................ 3
ECE 249  Introduction to ECE Theory and Practice .............. 4
ECE 250  ECE Theory and Practice .................................. 4
ECE 253  Adult Supervision in EC Classrooms ..................... 2-3

plus at least six units in any one of these areas of concentration:

Creative expression
ECE 237*  Topics in Current Theory, Research and Implementation 0.5-3
ECE 242  Music for the Young Child ............................... 2
ECE 243  Creative Art for the Young Child ........................ 1
or one elective from ART 155, 160; or PEDAN 129, 130, 138,
139, 142; or DRAMA 150; or MUSIC 101, 102, 120, 150, 151,
171, or MUSLT 112 ......................................................... 1

Family day care/Foster care provider
ECE 245  Introduction to Day Care .................................. 1
ECE 246  Introduction to Foster Parenting ......................... 1.5
ECE 247  Issues of Foster Parenting ................................ 1

Infants and toddlers
ECE 230  Infant and Toddler Care .................................. 3
ECE 231  Infants and Toddlers: Issues and Applications .......... 3

Language and literature
ENGL 177  Children's Literature .................................... 3
ECE 237*  Topics in Current Theory, Research and Implementation 0.5-3
ECE 240  Language, Literacy, and Literature for the Young Child .... 3
L111  Storytelling ....................................................... 2

Science and math
ECE 127  Nutrition and the Young Child ......................... 1
ECE 237*  Topics in Current Theory, Research and Implementation 0.5-3
ECE 241  Science and Mathematics for Early Childhood Education .... 3
(Note: Two ECE 237 courses in this category are required)

Sign language
SIGN 266  Sign Language: SEE I ...................................... 3
SIGN 267  Sign Language: SEE II .................................... 3
SIGN 268  Sign Language: SEE III .................................. 3
SIGN 280  American Sign Language (ASL) I ....................... 3
SIGN 281  American Sign Language (ASL) II ...................... 3
SIGN 282  American Sign Language (ASL) III ..................... 3

Special needs
ECE 129  Dealing with Difficult and Aggressive Young Children ......................................................... 3
ECE 137  Issues of Separation and Loss with Children and Families ......................................................... 3
ECE 263  The Special Needs Child – Speech, Language and Hearing ......................................................... 1
ECE 265  Working with Young Children with Special Needs ......................................................... 2
ECE 269  Introduction to Special Needs in Young Children ......................................................... 3

or any Sign Language course:
SIGN 266, 267, 268, 280, 281, or 282 .................................. 3

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 units required: 50-51

*Topics for ECE 237 vary. Please contact the Early Childhood Education Department to verify if a ECE 237 course meets the requirements for a particular area of specialization.

Certificate of achievement - Early childhood education - Teacher

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 require-
ments, 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 better. Attending classes in the day, the evening or both can complete certificate requirements.

required courses          units
ECE 124  Child Development and Psychology ...................... 3
ECE 125  Introduction to Early Childhood Education ............ 3
ECE 126  Health, Safety and Nutrition for the Young Child ........ 3
ECE 128  Curriculum Development for Young Children ... 3
ECE 130  Child, Family and Community .......................... 3
ECE 144  Diversity in Early Childhood Education ................ 3
ECE 249  Introduction to ECE Theory and Practice .............. 4
ECE 250  ECE Theory and Practice .................................. 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 units required: 42
**Certificate of accomplishment - Early Childhood Education - Resource (foster) family specialist**

This certificate meets the educational requirements for caregivers of children in out-of-home placement in Contra Costa County, including all resource families who were previously categorized as foster care providers, foster-adopt families, relative caregivers, non-relative extended family members and group home staff.

To earn a certificate of accomplishment, students must complete each course with a grade of “C” or better. Certificate requirements can be completed by attending classes in the day, evening or weekends.

<table>
<thead>
<tr>
<th>required courses</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 246 Introduction to Foster Parenting</td>
<td>1.5</td>
</tr>
<tr>
<td>ECE 248 Child, Family, and Foster/Kin Care Community</td>
<td>1</td>
</tr>
</tbody>
</table>

plus at least 7 units from one of the 3 specialty areas listed below:

**Providing care for children aged 0-5 years**

| ECE 266 Meeting the Developmental Needs of Children at-Risk 0-5 Years | 1 |
| ECE 129* Dealing with Difficult and Aggressive Young Children | 3 |
| ECE 137* Issues of Separation and Loss with Children and Families | 3 |
| ECE 150 Topics in Child Development | 1 |
| ECE 156 Topics for Caregivers 0-5 Years | 0.3 |
| ECE 247 Issues of Foster Parenting | 1 |
| ECE 263* The Special Needs Child: Speech, Language, and Hearing Development | 1 |
| ECE 265* Working with Young Children with Special Needs | 2 |
| ECE 269* Introduction to Special Needs in Young Children | 3 |

**Providing care for children aged 6-11 years**

| ECE 267 Meeting the Developmental Needs of Children at-Risk 6-11 Years | 1 |
| ECE 129* Dealing with Difficult and Aggressive Young Children | 3 |
| ECE 137* Issues of Separation and Loss with Children and Families | 3 |
| ECE 157 Topics for Caregivers of Children in Out-Of-Home Placement I | 0.3 |
| ECE 220 Programs for the School Age Child | 3 |
| ECE 247 Issues of Foster Parenting | 1 |
| ECE 263* The Special Needs Child: Speech, Language, and Hearing Development | 1 |
| ECE 265* Working with Young Children with Special Needs | 2 |
| ECE 269* Introduction to Special Needs in Young Children | 3 |

**Providing care for youth aged 12-18 years**

| ECE 060 Life Skills for Emancipating Youth I | 1 |
| ECE 061 Life Skills for Emancipating Youth II | 1 |
| ECE 158 Topics for Caregivers of Children in Out-Of-Home Placement II | 0.3 |
| ECE 247 Issues of Foster Parenting | 1 |
| ECE 268 Meeting the Developmental Needs of Youth at-Risk 12-18 Years | 1 |

**Total units required**: 26

**Electronics – ELTRN**

**Possible career opportunities**

The types of jobs and careers involving electrical/electronics include: electrical, medical, industrial, and commercial electrical programmable logic controller systems; communications; automotive and others.

**Certificate of achievement - Electricity/Electronics technology**

This program prepares students for jobs installing, repairing, maintaining and servicing electrical and electronics equipment. Possible career opportunities include: 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: Electricity 120, 121, 271, 266, 267, Electronics 102B 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 better and maintain an overall GPA of 2.5 or better in the coursework required for the certificate.

<table>
<thead>
<tr>
<th>required courses</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMTC 110B Introduction to Computer Hardware/Software</td>
<td>4</td>
</tr>
<tr>
<td>ELECT 120 Direct Current Circuits</td>
<td>4</td>
</tr>
<tr>
<td>ELECT 121 Alternating Current Circuits</td>
<td>4</td>
</tr>
<tr>
<td>ELECT 130 Motors and Motor Controllers</td>
<td>4</td>
</tr>
<tr>
<td>ELTRN 102B Linear Circuits</td>
<td>4</td>
</tr>
<tr>
<td>ELECT 266 Electrical Codes: Articles 90-398</td>
<td>3</td>
</tr>
<tr>
<td>ELECT 267 Electrical Codes: Articles 400-830</td>
<td>3</td>
</tr>
<tr>
<td>ELTRN 140 Electronics Fabrication</td>
<td>2</td>
</tr>
<tr>
<td>ELECT 271 Programmable Logic Controllers</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total units required**: 26

**Recommended courses**

| COMTC 110A Exam Preparation | 2 |
| COMTC 110B Introduction to Computer Hardware/Software | 4 |
| CNT 103 Voice, Video and Network Cabling | 1 |
| CNT 105 Computer Networking Hardware/Software | 3 |

*Note: there may be no duplication of coursework in these two specialty areas.
French – FRNCH

Certificate of accomplishment achievement - French
NOTE: This certificate program is offered pending approval from the State Chancellor's Office. Please verify the accuracy of the program requirements with a DVC counselor.
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 13 to 18 units from the following list of courses which must be completed with a grade of “C” grade or better.

Complete 13-18 units from the following list of courses: units
FRNCH 120  First Term French ........................................ ......... 5
FRNCH 121  Second Term French ......................................... 5
FRNCH 220  Third Term French .......................................... 5
FRNCH 221  Fourth Term French ......................................... 5
FRNCH 230  Fifth Term French ........................................... 5
FRNCH 231  Sixth Term French ............................................ 3

Total units required  13-18

Italian – ITAL

Certificate of accomplishment achievement - Italian
NOTE: This certificate program is offered pending approval from the State Chancellor's Office. Please verify the accuracy of the program requirements with a DVC counselor.
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.
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 13 to 18 units from the following list of courses which must be completed with a grade of “C” grade or better.

Complete 13-18 units from the following list of courses:

FRNCH 120  First Term French ........................................ ......... 5
FRNCH 121  Second Term French ......................................... 5
FRNCH 220  Third Term French .......................................... 5
FRNCH 221  Fourth Term French ......................................... 5
FRNCH 230  Fifth Term French ........................................... 5
FRNCH 231  Sixth Term French ............................................ 3

Total units required  13-18

German – GRMAN

Certificate of accomplishment achievement - German
NOTE: This certificate program is offered pending approval from the State Chancellor's Office. Please verify the accuracy of the program requirements with a DVC counselor.
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 13 to 18 units from the following list of courses which must be completed with a grade of “C” grade or better.

Complete 13-18 units from the following list of courses: units
GRMAN 120  First Term German ............................................. 5
GRMAN 121  Second Term German ......................................... 5
GRMAN 220  Third Term German .......................................... 5
GRMAN 221  Fourth Term German ......................................... 5
GRMAN 230  Fifth Term German ........................................... 3
GRMAN 231  Sixth Term German ............................................ 3

Total units required  13-18

Japanese – JAPAN

Certificate of accomplishment achievement - Japanese
NOTE: This certificate program is offered pending approval from the State Chancellor's Office. Please verify the accuracy of the program requirements with a DVC counselor.
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 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 13 to 18 units from one of the following lists of courses which must be completed with a grade of “C” grade or better.

List A complete a minimum of 15 units from the following list of courses:

JAPAN 120  First Term Japanese ........................................ 5
JAPAN 121  Second Term Japanese .................................... 5
JAPAN 220  Third Term Japanese ....................................... 5
JAPAN 221  Fourth Term Japanese .................................... 5

Total units required  15

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Music – MUSIC

Certificate of achievement
Music industry studies – Recording arts

Certificate of accomplishment achievement - Music industry studies – Recording arts

NOTE: This certificate program is offered pending approval from the State Chancellor’s Office. Please verify the accuracy of the program requirements with a DVC counselor.

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 area 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 accomplishment, students must complete the required courses with a “C” grade or better. Required courses are available in the evening and during the day.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 124</td>
<td>Introduction to Music Production and Multi-track Recording</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 172</td>
<td>Introduction to Electronic Music and MIDI</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 174</td>
<td>Introduction to ProTools</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 181</td>
<td>Introduction to the Music Industry</td>
<td>2</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>MUSIC 125</td>
<td>Advanced Music Production and Multi-track Recording</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 173</td>
<td>Advanced Electronic Music</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 175</td>
<td>Applied ProTools</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 177</td>
<td>Introduction to Reason and ACID</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 182</td>
<td>Songwriting</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 270</td>
<td>Applied Projects in Music Industry Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

Total units required 17

Spanish – SPAN

Certificate of accomplishment achievement - Spanish

NOTE: This certificate program is offered pending approval from the State Chancellor’s Office. Please verify the accuracy of the program requirements with a DVC counselor.

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 a minimum of 15 units from the following list of courses which must be completed with a grade of “C” grade or better.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 120</td>
<td>First Term Spanish</td>
<td>5</td>
</tr>
<tr>
<td>SPAN 121</td>
<td>Second Term Spanish</td>
<td>5</td>
</tr>
<tr>
<td>SPAN 220</td>
<td>Third Term Spanish</td>
<td>5</td>
</tr>
<tr>
<td>SPAN 221</td>
<td>Fourth Term Spanish</td>
<td>5</td>
</tr>
<tr>
<td>SPAN 230</td>
<td>Fifth Term Spanish</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 231</td>
<td>Sixth Term Spanish</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 250</td>
<td>Contemporary Spanish and Latin American Literature</td>
<td>3</td>
</tr>
</tbody>
</table>

Total units required 13-18

Russian – RUSS

Certificate of accomplishment achievement - Russian

NOTE: This certificate program is offered pending approval from the State Chancellor’s Office. Please verify the accuracy of the program requirements with a DVC counselor.

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 which must be completed with a grade of “C” grade or better.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUSS 120</td>
<td>First Term Russian</td>
<td>5</td>
</tr>
<tr>
<td>RUSS 121</td>
<td>Second Term Russian</td>
<td>5</td>
</tr>
<tr>
<td>RUSS 220</td>
<td>Third Term Russian</td>
<td>5</td>
</tr>
<tr>
<td>RUSS 221</td>
<td>Fourth Term Russian</td>
<td>5</td>
</tr>
<tr>
<td>RUSS 220</td>
<td>Fifth Term Russian</td>
<td>3</td>
</tr>
</tbody>
</table>

Total units required 15
### III. Changes to courses

#### Courses added

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Lecture/Laboratory</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENTL-190</td>
<td>Ultra Sonic Scaling for Orthodontic Procedures for the RDA</td>
<td>1</td>
<td>LR</td>
<td></td>
<td>Theory and utilization of an ultrasonic scaler for the removal of excess supragingival cement from the coronal surfaces of teeth undergoing orthodontic treatment as described by the Dental Board of California. Emphasis will be placed on following standard precautionary principles and infection control protocols before, during and after the procedure. CSU</td>
</tr>
<tr>
<td>DENTL-191</td>
<td>Pit and Fissure Sealants for the RDA</td>
<td>1.5</td>
<td>SC</td>
<td></td>
<td>This course presents the theory, utilization, preparation and application of dental pit and fissure sealants for Registered Dental Assistants as outlined by the Committee on Dental Auxiliaries (COMDA) and the Dental Board of California (DBC). Emphasis will be placed on following standard precautionary principles and infection control protocols before, during and after procedure. CSU</td>
</tr>
<tr>
<td>ENGIN-160</td>
<td>Introduction to Manufacturing</td>
<td>3</td>
<td>LR</td>
<td></td>
<td>This course will cover production and manufacturing techniques of metals, alloys and polymers. Students will learn techniques of casting, forming, forging, extrusion and sintering of materials. Blueprint reading, the use of measuring instruments and gauges, layout techniques and material removal using machine tools will also be covered. Instruction will include the set-up and operation of machine shop equipment. Principles of quality control and quality assurance with special emphasis on ANSI Y14 standards will be covered. CSU</td>
</tr>
<tr>
<td>ENGIN-160</td>
<td>Digital Editing</td>
<td>3</td>
<td>SC</td>
<td></td>
<td>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</td>
</tr>
<tr>
<td>FILM-294</td>
<td>Film and TV Scriptwriting - Advanced</td>
<td>3</td>
<td>P/NP</td>
<td></td>
<td>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</td>
</tr>
</tbody>
</table>

#### Courses deleted

- COMSC-146
- COMSC-151
- COMSC-152
- COMSC-154
- COSMC-155

- COMSC-298
- COMTC-110B – Now COMTC 110
- ELTRN-201A
- ELTRN-271 – Now ELECT 271
AET-130 Photovoltaic Systems Design and Installation
2 units SC
- May be repeated once
- 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

ARTDM-145 Digital Editing
3 units SC
- 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term
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

ARTDM-160 3D Modeling and Animation I
3 units SC
- May be repeated once
- 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term
- Recommended: ARTDM 110 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, nurbs, 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

ARTDM-161 3D Modeling and Animation II
3 units SC
- May be repeated once
- 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement 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

ARTDM-165 Digital Editing
3 units SC
- 36 hours lecture/18 hours laboratory/36 hours laboratory by arrangement per term
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

ASTRO-128 The Universe for Beginners
4 units LR
- 54 hours lecture/54 hours laboratory per term
- Recommended: MATH 110 or equivalent, and eligibility for ENGL 122 or equivalent
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)

BIOSC-130 Principles of Cellular and Molecular Biology
5 units SC
- May be repeated once
- 54 hours lecture/108 hours biology laboratory per term
- Prerequisite: CHEM 120 or equivalent
- Recommended: eligibility for ENGL 122
- Note: generally, BIOSC 130 and 131 can be taken in either order or concurrently, however, for students with little or no background in biology, BIOSC 130 is recommended before BIOSC 131.
A study of universal biological processes with emphasis upon the cellular level of organization. Topics include cellular morphology and ultrastructure, enzyme structure and function, biochemical pathways, cell division, replication, transcription and translation, genetics and evolution, embryology, homeostasis and selected topics in physiology. CAN BIOL 2 BIOSC 130+131 = CAN BIOL SEQ A, CSU, UC

BUS-115 Business E-Mail and Web-Based Communication
1 unit SC
- 18 hours lecture per term
- Recommended: eligibility for ENGL 122 or equivalent
A course in how to prepare professional, high-quality e-mail messages and Web-based communications for both internal and external audiences. Students will learn how these tools are used in the workplace and how to use them professionally and effectively. CSU

Courses changed

(Note: changes are underlined.)
CHEM-109 Introduction to Organic and Biochemistry
4 units SC
- 72 hours lecture/36 hours laboratory per term
- Prerequisite: CHEM 108 or CHEM 120 or high school chemistry or equivalent

Chemistry 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 Chemistry 108 and 109 sequence is designed to meet the needs of programs such as dental hygiene and nursing. CAN CHEM 8 CHEM 108+109 = CAN CHEM SEQ A, CSU, UC (credit limits may apply to UC-see counselor)

CHEM-120 General College Chemistry I
5 units LR
- 90 hours lecture/72 hours laboratory per term
- Prerequisite: CHEM 108 or appropriate chemistry skill level demonstrated through Chemistry Diagnostic Test or equivalent; MATH 120 or appropriate placement through math assessment process or equivalent
- Recommended: eligibility for ENGL 122 or equivalent
- Note: calculator used in this course

An introduction to the fundamentals of chemistry including the topics: atomic theory, chemical reactions, bonding, structure, stoichiometry, gases, solutions, redox, thermodynamics, equilibrium, and acid-base chemistry. CAN CHEM 2 CHEM 120+121 = CAN CHEM SEQ A, CSU, UC

CHEM-121 General College Chemistry II
5 units LR
- 90 hours lecture/72 hours laboratory per term
- Prerequisite: CHEM 120 or equivalent

This course is a continuation of CHEM 120, General College Chemistry I. Subject matter includes: buffers, titration curves, solubility products, thermodynamics, electrochemistry, kinetics, molecular orbital theory, coordination complexes, nuclear chemistry, organic chemistry, spectroscopy, quantitative experiments, and qualitative analysis. CAN CHEM 4 CHEM 120+121 = CAN CHEM SEQ A, CSU, UC

CHEM-226 Organic Chemistry I
5 units LR
- 90 hours lecture/72 hours laboratory per term
- Prerequisite: CHEM 121 or equivalent

This course is the first semester of a two semester 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, aromatics, alkyl halides, alcohols, and ethers). Basic organic laboratory techniques are introduced and used in syntheses or other projects. Chemical safety, information retrieval and good lab practices are emphasized. A variety of laboratory instrumentation skills are developed including operation and analysis using GC, IR and UV-Visible spectroscopy, CSU, UC

CHEM-227 Organic Chemistry II
5 units LR
- 90 hours lecture/72 hours laboratory per term
- Prerequisite: CHEM 226 or equivalent

A continuation of Chemistry 226, this second semester course covers spectroscopy, additional reaction mechanisms, the nomenclature, physical properties, and reactions of other basic classes of compounds (organometallics, aldehyes, 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 library research project using university-level chemical literature resources. CSU, UC

COMSC-100 Introduction to Computers and Information Systems
3 units SC
- 54 hours lecture/18 hours laboratory by arrangement per term

A beginning course designed to acquaint the student with the general concepts and basic vocabulary of computers and information systems. Includes introduction to the organization and functions of basic components of computers, and information processing systems. Instruction in programming procedures and programming logic is provided. Appropriate for the student with a general interest in this area as well as for the student desiring to pursue further training in computer science or information systems. CAN BUS 6 CAN CSCI2, CSU, UC (credit limits may apply to UC-see counselor)

COMTC-110 Introduction to Computer Hardware/Software
4 units LR
- May be repeated once
- 54 hours lecture/54 hours laboratory per term
- Formerly COMTC 110B

This is an introductory level course for students who have no computer hardware experience. Students will build and configure a variety of computer systems, and learn how to do basic hardware and operating system troubleshooting and repair. This course will also include topics in networking, printers, data acquisition and robotic controls, CSU

COMTC-115 A+ Exam Preparation
2 units SC
- 36 hours lecture/18 hours laboratory per term
- Recommended: COMTC 110 or equivalent

This course will cover the topics that are on the A+ computer technician exam. Students will learn the scope of the exam by taking practice exams and then study on the areas that they need to improve. CSU
CNT-103 Voice, Video and Network
Cabling
1 unit LR
- May be repeated once
- 18 hours lecture/36 hours laboratory per term
This course is designed to provide students with the practical aspects of design, installation, testing, and troubleshooting cable carrying voice, data, and video signals. This course is designed to provide students with job entry skills to install and terminate voice, video and networking cable to industry standards. Students will terminate and test copper and fiber-optic cable. After completion of this course, students are able to be FOA certified. CSU

CNT-161 Router Configuration and Implementation
2 units SC
- May be repeated once
- 27 hours lecture/27 hours laboratory per term
- Recommended: CNT 105 or equivalent
This course is designed to introduce students to router configuration and implementation. Instruction includes safety, router commands, router bootup process, router IOS backup and restore process, TCP/IP addressing implementation, dynamic routing, and the administrator's role and function. This course is part of the preparation for the Cisco Certified Networking Associate (CCNA) certification. CSU

COUNS-155 Topics in Group Counseling
.3-.4 units P/NP
- May be repeated three times
- Variable hours
- Formerly COUNS 100
An interpersonal experience designed to develop self-awareness and to increase understanding of and competence in interpersonal relationships.

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 contributions of 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. CSU

ECE-150 Topics in Child Development
1-3 units P/NP
- May be repeated three times
- 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. 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 related subdivisions. Specific topics will be announced in the schedule of courses. CSU

ECE-151 Topics in Cognitive Development
1-3 units P/NP
- May be repeated three times
- 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. Required of parents whose children are enrolled in Developmental Children's Center.
A supplemental course in cognitive development to provide a study of current concepts and problems in cognitive development related subdivisions. Specific topics will be announced in the schedule of courses. CSU

ECE-152 Topics in Physical Development
1-3 units P/NP
- May be repeated three times
- 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. Required of parents whose children are enrolled in Developmental Children's Center.
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 courses. CSU

ECE-153 Topics in the Role of Play in Development
1-3 units P/NP
- May be repeated three times
- 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. Required of parents whose children are enrolled in Developmental Children's Center.
A supplemental course in the role of play in development to provide a study of current concepts and problems in play development related subdivisions. Specific topics will be announced in the schedule of courses. CSU
ECE-154 Topics in Personality Development
1-3 units P/NP
- May be repeated three times
- 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. Required of parents whose children are enrolled in Developmental Children’s Center.

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

ECE-155 Topics in Child Behavior
1-3 units P/NP
- May be repeated three times
- 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. Required of parents whose children are enrolled in Developmental Children’s Center.

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

ECE-250 Early Childhood Education Theory and Practice
4 units SC
- 36 hours lecture/108 hours laboratory per term
- Prerequisite: ECE 124 or equivalent and ECE 125 or equivalent
- Co-requisite: ECE 249 or equivalent (may be taken previously)
- 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 study of Emergent Curriculum, the Project Approach and the Developmental Appropriate curriculum methods and materials to be used in early childhood education. Includes supervised teaching experience in a preschool laboratory setting and provides some understanding of and experience in assisting in various types of child care centers. Special focus on children’s language skills, cognitive development and creative expression. CSU

ELECT-271 Programmable Logic Controllers
4 units LR
- 54 hours lecture/54 hours laboratory per term
-Recommended: ELECT 120 or equivalent
- Formerly ELTRN 271

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

ELTRN-140 Electronics Fabrication
2 units LR
- May be repeated once
- 27 hours lecture/27 hours laboratory per term
- Recommended: ELECT 121 or equivalent

A study of electronics drafting, printed board design, and the development and construction of an electronic project. CSU

ENGL-122 Freshman English: Composition and Reading
3 units LR
- 54 hours lecture per term
- Prerequisite: successful completion of ENGL 116 and ENGL 118 or equivalent recommendation from assessment process or English AP score of 3

This course engages students regularly in the writing and reading process, requiring a substantial amount of reading of significant literature. 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 understand and employ varied rhetorical strategies used by accomplished writers. CAN ENGL 2, ENGL 122+123= CAN ENGL SEQ A CSU, UC

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, the novel). This course will teach students to recognize the distinguishing elements of each literary form and develop a 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 shapes and is shaped by expressive and visual arts of the time. 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 and related arts by and about women from at least three of the following cultural, ethnic, and racial groups: Hispanic-Latina American, African American, European American, Asian American, and Native American cultural, ethnic and racial groups. Under scrutiny will be women’s prescribed role in society as well as the language, ideology, substance and form of the artistic renderings. Through a study of the artist’s work and an understanding of the historical, social, and psychological forces shaping the art, students should reach a heightened awareness of women’s contributions and struggles in our society as well as in others. Through criticism of and writing about the art, the students should also reach a greater understanding of artistic excellence. CSU, UC
ENGL-222 Creative Writing
3 units SC
• May be repeated once
• 54 hours lecture per term
• Prerequisite: eligibility for ENGL 122
• Note: the student is limited to a maximum of 12 units in any combination of ENGL 222, 223, and 224.

Students will analyze the varied creative writing techniques of selected authors and present original writing for discussion and criticism by the class and the instructor. CAN ENGL 6, CSU, UC (credit limits may apply to UC-see counselor)

ENGL-225 Writing About Cultural Identity in America
3 units SC
• May be repeated once
• 54 hours lecture per term
• Prerequisite: eligibility for ENGL 122

This workshop of expository writing provides an environment in which students will develop skills related to research techniques, interviewing, and specialties of nonfiction such as autobiography, biography, and creative nonfiction. Students will read works of American authors with particular attention paid to multicultural groups. Students will present original prose writing (approximately 6000 words) for informal discussion and criticism. CSU, UC

HSCI-164 Mind Body Healing: 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 will examine healing from the perspectives of different cultures and healing systems. Many healing therapies, systems, and traditions will be explored in order to discover the connections between mind, body, spirit, and emotions. Many healing approaches will be covered including Traditional Chinese Medicine, personality theory, disease, shamanic healing herbs and plant medicine, Ayurveda and the chakra system, music therapy, art therapy, and conventional Western Medicine. CSU

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 current scientific knowledge and human behavior as it relates to health issues of particular concern to women such as self-help, reproductive management, menopause, nutrition, health research, breast cancer, infectious disease and stress. CSU, UC (credit limits may apply to UC-see counselor)

MUSIC-252 Piano Ensemble
1 unit SC
• May be repeated three times
• 54 hours lecture per term
• Prerequisite: audition

This course is for the study and performance of piano music for multiple pianists and works for voice/instrument(s) and piano from the Western Classical tradition. 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

PE-105 Water Aerobics
.5-2 units SC
• May be repeated three times
• 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)

PE-108 Beginning Hatha Yoga
.5-2 units SC
• May be repeated once
• Variable hours
• Formerly PE-114

This is an activity course exploring the principles of Hatha Yoga to achieve 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)

PE-163 Intermediate/Advanced Golf
.5-2 units SC
• May be repeated once
• Variable hours

Recommended: PE 162 or equivalent

This is an activity course focusing on intermediate/advanced level golf skills. Primary participation is through playing nine holes of golf. CSU, UC (credit limits may apply to UC-see counselor)

PE-188 Soccer
.5-2 units SC
• May be repeated three times
• Variable hours

This is an activity course emphasizing the fundamental skills and strategies of soccer. This course focuses on rules, etiquette, safety, and soccer skills, such as dribbling, passing, shooting and defending. Offensive and defensive positions and basic team strategies are also addressed. No previous soccer experience is necessary. CSU, UC (credit limits may apply to UC-see counselor)

PE-192 Beginning Volleyball
.5-2 units SC
• May be repeated once
• 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)

PE-193 Intermediate/Advanced Volleyball
.5-2 units SC
• May be repeated once
• Variable hours
• Recommended: PE 192 or equivalent

This is an activity course focused on intermediate/advanced 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)
PE-199  **Sport-Specific Athletic Conditioning**

.5-2 units SC

- May be repeated three times
- Variable hours
- **Recommended: PE 192 or equivalent**

An activity course designed for students to increase their physical conditioning, skill/technique level, and knowledge of a specific sport. See current course schedule for sport offerings. CSU, UC (credit limits may apply to UC—see counselor)

SOCIO-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

SOCSC-298  **Independent Study**

.5-3 units SC

- May be repeated three times
- Variable hours
- **Prerequisite: submission of acceptable educational contract to department and instruction office; topics must extend study beyond courses offered**

An opportunity for advanced students to study special interests under the direction of the faculty. CSU

SPTUT-020NC  **Supervised Tutoring**

0 unit

- Non-degree applicable
- Variable hours
- **Note: This is a non-credit course. Students must be enrolled in the DVC course for which they are receiving tutoring and be referred by an instructor or counselor. Positive attendance is counted for up to 2 hours of tutoring per hour of class for each course for which the student is receiving tutoring. Therefore, students may enroll in multiple sections of SPTUT 020NC during any one semester.**

This course provides individualized and group tutoring services to assist students in increasing their success in college by becoming independent learners and mastering course content. The student must be enrolled in a college credit course and be referred by an instructor or counselor. A student may enroll for tutoring support in more than one college course per semester. Attention will be given to the course subject matter to enable the student to successfully complete the course requirements.