Announcement of Courses & Course Numbers

COURSES

Credit Courses: Courses numbered 001-399 are graded courses authorized by the Governing Board of Solano Community College. All courses are not offered every year. Courses offered depend on prospective enrollment, the availability of instructors and physical facilities. Prospective students should consult the current Schedule of Classes for information on course offerings for a specific semester.

Noncredit Courses: The courses numbered 500-599 are offered on a noncredit basis. Regular attendance and participation are required. No grades or college credit are issued. Contact the Office of Admissions and Records or see the Schedule of Classes for current offerings.

Community Education Courses: The College offers a variety of Community Education courses and workshops that are designed to meet the needs of community residents and businesses. These courses are fee-based, not for credit courses that do not receive any tax support. No student records are kept by the Office of Admissions and Records. Community Education courses are not listed in this Catalog but in a separate bulletin, *Vistas*, published each semester (fall and spring). Contact the Community Education Office for course schedules and details about registration at (707) 864-7149 and online: ***www.solano.edu/vistas.***

CO/PREREQUISITES AND ADVISORIES

It is the intent of Solano Community College to guide students into courses in which they will have the best opportunity for academic success. Therefore, many courses have corequisite, prerequisites or advisories indicated in their descriptions.

Corequisite details: There are two types of corequisites. The first is a course or equivalent preparation that **must** be taken concurrently with another course. The second is a course or equivalent preparation that may be completed before **or** taken concurrently with another course. Both types of corequisites are listed as such under "Prerequisites," but the second type is followed by the parenthetical phrase "may be taken concurrently." A student's enrollment in a course with a corequisite is blocked until the requirements of the corequisite are satisfied.

Prerequisite: A course or equivalent preparation that **must** be completed **before** enrolling in another course. A student's enrollment in a course with a prerequisite is blocked until the requirements of the prerequisite are satisfied.

Advisory: A course or equivalent preparation that will broaden or deepen a student's learning experience in a subsequent course. A student's enrollment in a course with an advisory is not blocked for lack of the advisory skills.

Co/Prerequisites. Course corequisites and prerequisites ensure that the student has the minimum level of knowledge and/or skills to be successful in the specific course or program. The skills, concepts, and proficiencies learned in the prerequisite are not taught in the subsequent course. Corequisite and prerequisite information for a course, if any, appears in the "Prerequisite" area of the catalog description. For registration purposes, if a student is currently enrolled in a prerequisite course, that student may enroll in a subsequent course **contingent** on successful completion of the prerequisite. If the student is unsuccessful in the prerequisite, he/she will be **dropped** automatically from the subsequent course.

Advisories. Advisories are recommendations made to enhance or deepen the student's learning experience in a course. While the advisory skills and proficiencies are not required in order for a student to be successful in the course, advisories should be taken seriously. For specific information, students should consult their counselor or faculty advisor. Solano Community College has established recommended minimum English and math standards for Associate-Degree level courses across the disciplines to advise students of the levels of writing, reading, and math skills they should have in order to have the most beneficial learning experience. Advisory information for a course appears in the "Course Advisory" area of the catalog description. The recommended **minimum** skill level in English in an Associate-Degree level course (SCC minimum English standard) is eligibility for enrollment in one English course one level below English 001. The recommended **minimum** skill level in mathematics in an Associate-Degree level course (SCC minimum Math standard) is eligibility for enrollment in elementary algebra (MATH 330).

Verification of a Co/Prerequisite. Students desiring to enroll in a course or program that specifies a co/prerequisite course and who have completed such a course at an institution other than Solano Community College must submit documentation to verify this

completion. This documentation (unofficial or official transcript or report card) must be presented to a counselor, faculty advisor, or division dean or Office of Admissions or Records.

Challenging a Co/Prerequisite. A student has the right to challenge a course co/prerequisite based on the following grounds: the co/prerequisite has not been established in accordance with the District process for establishing co/prerequisites; the co/prerequisite is either unlawfully discriminatory or is being applied in an unlawfully discriminatory manner; the prerequisite course has not been made "reasonably available" and the required completion of it will cause a delay of one or more terms in attaining the goal specified in the student's authorized Individualize Education Plan (IEP); or the student has the knowledge or ability to succeed in the course or program despite not meeting the co/prerequisite. In the challenge process, **the burden of proof is on the student**. In order to file a challenge, students must submit a "Petition to Challenge a Course Pre/Corequisite," available at the Office of Admissions and Records. If the challenge is upheld, the student will be allowed to enroll, contingent on the availability of space in the course; if denied, the student will not be allowed to enroll or, if already enrolled, will be dropped automatically from the class. Refer to the form for more detailed information on the requirements and procedures for processing this petition.

COURSE NUMBERING SYSTEM
The following numbering system indicates transferability, credit or noncredit status and other related information. For specific transfer information, students should consult a counselor and refer to the catalog of the prospective transfer institutions.

COURSE NUMBERS

001-049 Qualify for the A.A./A.S. Degree; transfer to the University of California system and the California State Universities.

050-099 Qualify for the A.A./A.S. Degree and transfer to the California State Universities.

100-199 Qualify for the A.A./A.S. Degree but, generally, do not transfer to four-year institutions. Some courses may be used to meet requirements in certain majors at some four-year institutions.

200-299 Vocational, credit courses which DO NOT apply to the A.A./A.S. Degree and do not transfer to four-year institutions.

300-399 Credit courses which DO NOT apply to the A.A./A.S. Degree. **Exception:** One English course one level below English 001 which may be applied to the Associate Degree as an elective and one elementary algebra course which may be used as an elective. These courses do not transfer to four-year institutions.

500-599 Noncredit courses.

600-799 Community Service courses. These courses are not for credit and usually charge a fee.

Some sequentially-numbered courses continue through two or more semesters and must often be taken in sequence. Check course prerequisites for appropriate course sequence.

The College reserves the right to cancel any class which does not meet the minimum enrollment requirements and whenever there are unexpected staffing or facility situations that cannot be satisfactorily resolved.

Course Identification Numbering System (C-ID)

The Course Identification Numbering System (C-ID) is a statewide numbering system that is different from the course numbers assigned by individual California Community Colleges. A C-ID Designator next to a course means that the course is comparable in content and scope to a similar course offered by participating California colleges and universities. Thus, if a catalog lists a C-ID Designator for a course, students can be assured that the course will be accepted at another California Community College that offers a course with the same C-ID Designator.

The C-ID Numbering System is particulary useful for students attending more than one California Community College since C-ID Designators are often applied to courses students need to prepare for transfer.

Below is the list of Solano Community College courses that currently have a C-ID designator.

Solano Community College		C-ID Designator
ACCOUNTING		
ACCT 001	Financial Accounting	ACCT 110
ACCT 002	Managerial Accounting	ACCT 120
ANTHROPOLOGY		
ANTH 001	Introduction to Biological Anthropology	ANTH 110
ANTH 002	Introduction to Cultural Anthropology	ANTH 120
ANTH 007	Introduction to Archaeology	ANTH 150
ART		
ART 002	Survey of Western Art from Renaissance to Contemporary	ARTH 120
ART 003A	Survey of Asian Art	ARTH 130
ART 003B	Art of Africa, Oceania, and Indigenous North America	ARTH 140
ART 006	2-D Foundations	ARTS 100
ART 007	Color Theory	ARTS 270
ART 008	3-D Foundations	ARTS 101
ART 015	Intermediate Drawing	ARTS 205
BIOLOGY		
BIO 004	Human Anatomy with Lab	BIOL 110B
BIO 005	Human Physiology with Lab	BIOL 120B
BUSINESS		
BUS 018	Legal Environment of Business	BUS 120
CHILD DEVELOPMENT AND FAMILY STUDIES		
CDFS 038	Child Growth and Development	CDEV 100
CDFS 050	Child Family and Community	CDEV 110
CDFS 053	Teaching in a Diverse Society	ECE 230
CDFS 054	Health, Safety and Nutrition	ECE 220
CDFS 062	Principles & Practices of Teaching Young Children	ECE 120
CDFS 063	Introduction to Curriculum	ECE 130
CDFS 064	Observation and Assessment	ECE 200
CDFS 065	Practicum in Early Childhood Education	ECE 210

Solano Community College		C-ID Designator
CHEMISTRY		
CHEM 002	General Chemistry for Science Majors Sequence A	CHEM 120S
CHEM 003	Organic Chemistry for Science Majors I, with Lab	CHEM 150
CHEM 004 + CHEM 003	Organic Chemistry for Science Majors Sequence A	CHEM 160S
COMPUTER INFORMATION SCIENCE		
CIS 021	Discrete Structures	COMP 152
CIS 022	Programming Concepts and Methodology I	COMP 122
CRIMINAL JUSTICE		
CJ 001	Introduction to Criminal Justice	AJ 110
CJ 002	Concepts of Criminal Law	AJ 120
CJ 011	Community and the Justice System	AJ 160
CJ 051	Criminal Investigation	AJ 140
CJ 053	Legal Aspects of Evidence	AJ 124
CJ 056	Juvenile Procedures	AJ 220
COMMUNICATION STUDIES		
COMM 001	Public Speaking	COMM 110
COMM 002	Introduction to Persuasion	COMM 190
COMM 012	Intercultural Communication	COMM 150
COMM 015	Oral Interpretation of Literature	COMM 170
COMM 050	Forensics (Speech & Debate)	COMM 160B
ECONOMICS		
ECON 001	Principles of Macroeconomics	ECON 202
ECON 002	Principles of Microeconomics	ECON 201

Course Identification Numbering System (C-ID)

Solano Community College		C-ID Designator
ENGLISH		
ENGL 002	Argumentative Writing and Critical Thinking Through Literature	ENGL 110
ENGL 006	Introduction to Creative Writing	ENGL 200
ENGL 030	Survey of American Literature 1	ENGL 130
ENGL 031	Survey of American Literature 2	ENGL 135
ENGL 040	Survey of British Literature 1	ENGL 160
ENGL 041	Survey of British Literature 2	ENGL 165
GEOGRAPHY		
GEOG 001	Introduction to Physical Geography	GEOG 110
GEOG 001L	Physical Geography, Laboratory	GEOG 111
GEOG 002	Introduction to Human Geography	GEOG 120
GEOG 004	World Regional Geography	GEOG 125
GEOG 006	California Geography	GEOG 140
GEOG 010	Introduction to Geographic Information Systems and Techniques, with Lab	GEOG 155
GEOLOGY		
GEOL 001	Physical Geology	GEOL 100
GEOL 002	Physical Geology Laboratory	GEOL 100L
GEOL 010	Introduction to Geographic Information Systems and Techniques, with Lab	GEOG 155
HISTORY		
HIST 002	World History to 1500	HIST 150
HIST 003	World History since 1500	HIST 160
HIST 004	Western Civilization I	HIST 170
HIST 005	Western Civilization II	HIST 180
HIST 017	United States History to 1877	HIST 130
HIST 018	United States History from 1865	HIST 140
JOURNALISM		
JOUR 001	Introduction to Reporting and Newswriting	JOUR 110
JOUR 011	Introduction to Mass Communications	JOUR 100
JOUR 060	Lower Division Student Media Practicum I	JOUR 130
JOUR 061	Lower Division Student Media Practicum II	JOUR 131
KINESIOLOGY		
KINE 020S	First Aid and CPR	KIN 101

Solano Community College		C-ID Designator
MATHEMATICS		
MATH 011	Introduction to Statistics	MATH 110
MATH 020	Single Variable Calculus I Early Transcendentals	MATH 210
MATH 021	Single Variable Calculus II Early Transcendentals	MATH 220
MATH 023	Ordinary Differential Equations	MATH 240
MATH 040	Introduction to Linear Algebra	MATH 250
MUSIC		
MUSC 001	Music Theory I	MUS 120
MUSC 001	Musicianship I	MUS 125
MUSC 002	Music Theory II	MUS 130
MUSC 002	Musicianship II	MUS 135
MUSC 003	Music Theory III	MUS 140
MUSC 003	Musicianship III	MUS 145
MUSC 004	Music Theory IV	MUS 150
MUSC 004	Musicianship IV	MUS 155
MUSC 005	Music Fundamentals	MUS 110
MUSC 009	Large Ensemble	MUS 180
MUSC 010	Large Ensemble	MUS 180
MUSC 014	Large Ensemble	MUS 180
MUSC 015	Large Ensemble	MUS 180
MUSC 016	Large Ensemble	MUS 180
MUSC 017	Large Ensemble	MUS 180
MUSC 020	Large Ensemble	MUS 180
MUSC 024	Large Ensemble	MUS 180
MUSC 025	Large Ensemble	MUS 180
MUSC 026	Large Ensemble	MUS 180
MUSC 040A	Applied Music	MUS 160
MUSC 040B	Applied Music	MUS 160
MUSC 040C	Applied Music	MUS 160
MUSC 040D	Applied Music	MUS 160
NUTRITION		
NUTR 010	Introduction to Nutrition Science	NUTR 110
PHOTOGRAPHY		
PHOT 056	Introduction to Photojournalism	JOUR 160

Course Identification Numbering System (C-ID)

PHYSICS

PHYS 002	Algebra/Trigonometry-Based Physics A	PHYS 105
PHYS 004	Algebra/Trigonometry-Based Physics B	PHYS 110
PHYS 006	Calculus-Based Physics for Scientists and Engineers: A	PHYS 205
PHYS 007	Calculus-Based Physics for Scientists and Engineers: B	PHYS 210
PHYS 008	Calculus-Based Physics for Scientists and Engineers: C	PHYS 215

POLITICAL SCIENCE

PLSC 001	Introduction to American Government and Politics	POLS 110
PLSC 002	Introduction to Comparative Government and Politics	POLS 130
PLSC 003	Introduction to International Relations	POLS 140
PLSC 004	Introduction to Political Science	POLS 150
PLSC 006	Introduction to Political Theory and Thought	POLS 120

PSYCHOLOGY

PSYC 001	Introductory Psychology	PSY 110
PSYC 002	Introduction to Biological Psychology	PSY 150
PSYC 004	Introduction to Research Methods in Psychology	PSY 200

SOCIOLOGY

SOC 001	Introduction to Sociology	SOCI 110

SPANISH

SPAN 001	Elementary Spanish I	SPAN 100
SPAN 001S	Spanish for Heritage Speakers I	SPAN 220
SPAN 002	Elementary Spanish II	SPAN 110
SPAN 002S	Spanish for Heritage Speakers II	SPAN 230
SPAN 003	Intermediate Spanish I	SPAN 200
SPAN 004	Intermediate Spanish II	SPAN 210

THEATRE ARTS

THEA 001	Acting I	THTR 151
THEA 002	Acting II	THTR 152
THEA 003	Stagecraft	THTR 171
THEA 006	Introduction to Theatre	THTR 111
THEA 008	Introduction to Stage Makeup or Stage Makeup	THTR 175
THEA 009	Script Analysis	THTR 114
THEA 020	Introduction to Stage Lighting or Lighting Design Fundamentals	THTR 173
THEA 021	Introduction to Design or Introduction to Theater Design	THTR 172
THEA 024A	Rehearsal and Performance in Production	THTR 191
THEA 024B	Rehearsal and Performance in Production	THTR 191
THEA 024C	Rehearsal and Performance in Production	THTR 191
THEA 024D	Rehearsal and Performance in Production	THTR 191
THEA 032A	Introduction to Stage Costume or Fundamentals of Costume Design	THTR 174
THEA 032C	Introduction to Stage Costume or Fundamentals of Costume Design	THTR 174
THEA 032D	Introduction to Stage Costume or Fundamentals of Costume Design	THTR 174
THEA 047A	Technical Theatre in Production	THTR 192
THEA 047B	Technical Theatre in Production	THTR 192
THEA 047C	Technical Theatre in Production	THTR 192
THEA 047D	Technical Theatre in Production	THTR 192

NOTE: This list will change periodically.
Consult a counselor or visit *http://www.c-id.net* or *http://www.assist.org* for the most current list of Solano Community College courses with C-ID agreement.

Accounting

Accounting

Program Description
In recent years, accounting has been one of the fastest growing professions, and the monetary rewards for the individual just entering the field and those achieving corporate positions are among the highest. Accountants deal with the financial condition of a company, an individual, or an organization. An accountant is an analyst who is employed because of expertise in financial matters.

Certificate of Achievement and Associate in Science Degree
A Certificate of Achievement can be obtained upon completion of the 29-unit major with a grade of C (2.0) or better in each course. The Associate in Science Degree can be obtained by completing a total of 60 units, including the required courses in the major, the general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who earn the Accounting Associate Degree or transfer with a focus on accounting will be able to:
1. Demonstrate the use of the accounting cycle to prepare the income statement, statement of owner's equity, and balance sheet while applying the generally accepted accounting principles and concepts.
2. Analyze and evaluate managerial decisions using basic managerial accounting concepts and theory.

Students who earn the Accounting Certificate will be able to:
1. Demonstrate the use of the accounting cycle to prepare the income statement, statement of owner's equity, and balance sheet while applying the generally accepted accounting principles and concepts.

REQUIRED COURSES . . . . **Units**
ACCT 001 Principles of Accounting - Financial. 4
ACCT 002 Principles of Accounting - Managerial. 4
ACCT 050 Computer Accounting 3
ACCT 176 Intermediate Accounting 3
ACCT 177 Cost Accounting 3
ACCT 183 Principles of Income Tax 3
CIS 001 Introduction to Computer Science 3
OR
CIS 050 Microcomputer Applications 3
CIS 066 Microsoft Word. 3
CIS 073 Microsoft Excel 3
   Total Units **29**

Recommended Electives:
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

This is a Gainful Employment Program. For additional information, please visit *http://www.solano.edu/gainful_employment/* and select "Accounting."

Account Clerk Job-Direct Certificate
All courses in the major must be completed with a grade of C or better

REQUIRED COURSES . . . . **Units**
ACCT 001 Principals of Accounting-Financial. 4
BUS 100 Work Readiness 1.5
CIS 073 Microsoft Excel 3
OT 162 Ten-Key. 1
   Total Units **8.5**

Accounting

ACCT 001   **4.0 Units**
Principles Of Accounting—Financial
Course Advisory: Eligible for English 001 and Elementary Algebra. A study and analysis of accounting as an information system, its importance and use by external uses such as investors, creditors, and other making decisions. The course covers of the accounting cycle, application of the generally accepted accounting principles, financial reporting, and statement analysis. The course will include issues relating to the valuation of assets, liabilities, and equity, the recognition of revenue and expenses, cash flow, internal controls, ethics, and International Financial Reporting Standards. *Four hours lecture.*

ACCT 002   **4.0 Units**
Principles Of Accounting—Managerial
Prerequisite: ACCT 001 with a minimum grade of C or P. Course Advisory: Working knowledge of Excel helpful. A study and analysis of how managers use accounting information in decision-making, planing, directing operations, and controlling, to include the following: terms and concepts; job order cost accounting; process cost accounting; departmental accounting; product analysis; pricing decisions; flexible budgeting; standard cost analysis; cost-volume-profit analysis; preparation of operational, capital and financial budgets; and analysis of financial reporting in manufacturing and service environments. *Four hours lecture.*

ACCT 050   **3.0 Units**
Computer Accounting
Prerequisite: ACCT 001. Course Advisory: SCC minimum English and Math standards. A hands-on course covering a complete computerized accounting system. Topics include a review of basic accounting concepts, preparation of business reports and graphs, and the creation of an accounting system for a company. *Three hours lecture.*

ACCT 176   **3.0 Units**
Intermediate Accounting
Prerequisite: ACCT 002 with minimum grade of C or P. Course Advisory: Working knowledge of Excel helpful. Accounting theory as applied to common issues faced by accountants in today's businesses. Lecture, group-study, and computer-based study emphasize the conceptual framework, the four major financial statements, footnotes, and present-value concepts. The class helps prepare the student for an entry-level position in professional accounting career. *Three hours lecture.*

ACCT 177   **3.0 Units**
Principles of Cost Accounting
Prerequisite: ACCT 002 with a minimum grade of C or P. A comprehensive study and analysis of manufacturing costs as they apply to planning, controlling, and determining unit costs, inventory valuation, and income. *Three hours lecture.*

ACCT 180   **3.0 Units**
Introduction To Accounting
Course Advisory: SCC minimum English and Math standards. A study and analysis of the accounting cycle for a merchandising business and professional enterprises, payroll accounting, accruals and deferrals, accounting systems, error correction, and financial reporting. *Three hours lecture.*

ACCT 183   **3.0 Units**
Principles Of Income Tax
Course Advisory: SCC minimum English and Math standards. A comprehensive study and analysis of the principles of federal income tax applied to individual, partnership, informational, and corporate tax returns. *Three hours lecture.*

Aeronautics

Airframe Maintenance Technician

Program Description
Practical and theoretical knowledge in basic maintenance techniques, plus the special requirements of either airframe or powerplant work. Upon satisfactory completion of the required courses, the student is eligible to take the Federal Aviation Administration written oral and practical examination for airframe or powerplant license.

Certificate of Achievement and Associate in Science Degree
A Certificate of Achievement can be obtained upon completion of one of the 41-unit majors listed below. An Associate in Science Degree can be obtained upon completion of the units required for the major in either Airframe or Powerplant or Airframe and Powerplant and general education requirements.

The Federal Aviation Administration (FAA) requires 1150 hours (four full semesters) of instruction to complete the Airframe or Powerplant curriculum. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who completes the Airframe Maintenance Technician Certificate of Achievement/Associate Degree will be able to:
1. Demonstrate proficient, entry-level aviation maintenance skills in airframe and powerplant with emphasis on aircraft engines, aircraft structures, and aircraft systems.
2. Have a working knowledge to inspect, maintain, service and repair aircraft electrical, engine (piston and turbine), airframe structure, flight control, hydraulic, pneumatic, fuel, navigation and instrument systems and other aircraft components specified by Federal Aviation Regulation Part 147.
3. Obtain an FAA, Airframe and Powerplant License upon completion of the Federal Aviation Administration (FAA) knowledge, oral, practical and written examination in general, airframe, and powerplant subjects.

REQUIRED COURSES . . . . **Units**
AERO 055 Aviation Maintenance
        Technician General I 10
AERO 102 Airframe Maintenance I 10
AERO 103 Aviation Maintenance
        Technician General II 10
AERO 105 Airframe Maintenance II 10
AERO 118 FAA Airframe Test Review
        & Qualification. 1
    Total Units **41**

To obtain the combination Airframe & Powerplant Maintenance Technician certificate or degree (an additional 750 hours, 2 semesters), also complete the three courses listed below: . . . . **Units**
AERO 106 Powerplant Maintenance I. 10
AERO 107 Powerplant Maintenance II 10
AERO 119 FAA Powerplant Test Review
        & Qualification. 1
    Total Units **21**

Recommended Electives:
AERO 150 FAA Special Projects-Airframe Enhancement
OCED 070 Occupational Soft Skills
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

These programs are Gainful Employment Programs. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Aeronautics Airframe Maintenance Technician,"
"Aeronautics Powerplant Maintenance Technician," or Aeronautics Airframe & Powerplant Maintenance Technician."

Aeronautics

Powerplant Maintenance Technician

Program Description
Practical and theoretical knowledge in basic maintenance techniques, plus the special requirements of either airframe or powerplant work. Upon satisfactory completion of the required courses, the student is eligible to take the Federal Aviation Administration written, oral and practical examination for airframe or powerplant license.

Certificate of Achievement and Associate in Science Degree
A Certificate of Achievement can be obtained upon completion of one of the 41-unit majors listed below. An Associate in Science Degree can be obtained upon completion of the units required for the major in either Airframe or Powerplant or Airframe and Powerplant and general education requirements.

The Federal Aviation Administration (FAA) requires 1150 hours (four full semesters) of instruction to complete the Airframe or Powerplant curriculum. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Powerplant Maintenance Technician Certificate of Achievement/ Associate Degree will be able to:
1. Demonstrate proficient, entry-level aviation maintenance skills in airframe and powerplant with emphasis on aircraft engines, aircraft structures, and aircraft systems.
2. Have a working knowledge to inspect, maintain, service and repair aircraft electrical, engine (piston and turbine), airframe structure, flight control, hydraulic, pneumatic, fuel, navigation and instrument systems and other aircraft components specified by Federal Aviation Regulation Part 147.
3. Obtain an FAA, Airframe and Powerplant License upon completion of the Federal Aviation Administration (FAA) knowledge, oral, practical and written examination in general, airframe, and powerplant subjects.

REQUIRED COURSES . . . . **Units**
AERO 055 Aviation Maintenance Technician
　　　　　General I 10
AERO 103 Aviation Maintenance Technician
　　　　　General II 10
AERO 106 Powerplant Maintenance I. 10
AERO 107 Powerplant Maintenance II 10
AERO 119 FAA Powerplant Test Review
　　　　　& Qualification. 1
　　Total Units **41**

To obtain the combination Airframe & Powerplant Maintenance Technician certificate or degree (an additional 750 hours, 2 semesters), also complete the three courses listed below: . . . . **Units**
AERO 102 Airframe Maintenance I 10
AERO 105 Airframe Maintenance II 10
AERO 118 FAA Airframe Test Review
　　　　　& Qualification. 1
　　Total Units **21**

Recommended Electives :
AERO 150 FAA Special Projects-Airframe Enhancement
OCED 070 Occupational Soft Skills
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

Aeronautics

AERO 055   **10.0 Units**
Aviation Maintenance Technician General I
Course Advisory: SCC Minimum English and Math standards. Presents the fundamentals necessary for the advanced study in Aeronautics. It will define the history of aviation and powerplant operation, and the study of flight: aircraft weight and balance, ground operation and servicing, mathematics, maintenance forms and records, basic physics, maintenance publication, and mechanic privileges and limitation. Safety is stressed throughout the course. In addition, this course is a study of the methods and processes used in the production of an aircraft, including shop safety. The course includes fundamentals in the use of hand tools and power equipment, aircraft drawings, cleaning, corrosion control; and the processes used by the manufacturers for aircraft construction. *Five hours lecture, fifteen hours lab.*

AERO 102   **10.0 Units**
Airframe Maintenance I
Course Advisory: SCC minimum English standard. This course presents the application of fundamental methods, techniques, and practices used in aircraft inspection, maintenance, and repair. The course includes fundamentals of shop safety, wood structures, fabric covering, finishes, composite structures, plastics, sheet-metal structures, welding, assembly and rigging, and airframe inspection. *Five hours lecture, fifteen hours lab.*

AERO 103   **10.0 Units**
Aviation Maintenance Technician General II
Course Advisory: SCC minimum English standard. This course offers a study of fluid control systems and components with emphasis on design, maintainability, testing and system repair. The course includes the fundamentals of hydraulic fluids,Fluid carrying lines and fittings, inspection, servicing and testing of pneumatic and hydraulic systems. The course also presents theory and application of direct and alternating current as related to aircraft electrical components and systems. *Five hours lecture, fifteen hours lab.*

AERO 105   **10.0 Units**
Airframe Maintenance II
Course Advisory: SCC minimum English standard. This course offers a detailed study of the fundamentals of fabrication, maintenance, and repair of aircraft airframe systems. The course includes study of all basic systems which include: landing gear, hydraulic, pneumatic, cabin atmospheric control, flight instrumentation, communication, navigation, fuel storage and delivery ,ice and rain detection, prevention and removal as well as fire detection and protection systems. *Five hours lecture, fifteen hours lab.*

AERO 106   **10.0 Units**
Powerplant Maintenance I
Course Advisory: SCC minimum English and Math standards. This course is designed to acquaint the student with reciprocating engines. The course includes study in the fundamentals of basic engine design, types and materials of construction, nomenclature, repair, overhaul and servicing, maintainability and reliability concepts. *Five hours lecture, fifteen hours lab.*

AERO 107   **10.0 Units**
Powerplant Maintenance II
Course Advisory: SCC minimum English and Math standard. The course presents a study of the theory, operation, maintenance and repair of the turbine engine and related systems. It gives the student practical hands on experience that will satisfy future employment and FAA requirements. *Five hours lecture, fifteen hours lab.*

AERO 118   **0.5 to 1.50 Units**
FAA Airframe Test Review and Qualification
Course Advisory: SCC minimum English and Math standards. This course is to be taken during the final semester of a student's enrollment in the Aeronautics program. The course consists of a comprehensive oral, practical, and written examination of all material covered in the Airframe Program for the purpose of verifying the students' readiness to pass the Federal Aviation Administration Airframe Examinations. Students may take this course up to the maximum number of units over multiple semesters. *This is an Open Entry/Open Exit course. One and one-half to four and one-half hours lab.*

Aeronautics

AERO   119   0.5 to 1.50 Units
FAA Powerplant Test Review & Qualification
Course Advisory: SCC minimum English and Math standards. This course is to be taken during the final semester of a student's enrollment in the Aeronautics program. The course consists of a comprehensive oral, practical, and written examination of all material covered in the Powerplant Program for the purpose of verifying the students readiness to pass the Federal Aviation Administration Powerplant Examinations. Students may take this course up to the maximum number of units over multiple semesters. *This is an Open Entry/Open Exit course. One and one-half to four and one-half hours lab.*

AERO   150   0.5 to 1.50 Units
FAA Special Projects and Course Enhancement
Course Advisory: SCC minimum English and Math standards; Any Solano College Aeronautics course (AERO 055-119); or previous training/experience in aeronautics. This course is designed to give Aeronautics students a chance to make up time lost for FAA certificate and / or to work on special projects required by FAA to bring students in line with new FAA FAR Part 66 requirements. Students may take this course up to the maximum number of units over multiple semesters. *This is an Open Entry/Open Exit course. One and one-half to four and one-half hours lab.*

AERO   151   0.5 to 1.50 Units
FAA Special Projects - Powerplant Enhancment
Course Advisory: SCC minimum English and Math standards. This course is designed to give Aeronautics students a chance to make up time lost for FAA certificate and / or to work on special projects required by FAA to bring students in line with new FAA FAR Part 66 requirements. The course also allows mechanics to take recurrent training as needed. *This is an Open Entry/Open Exit course. One and one-half to four and one-half hours lab.*

Anthropology

Associate in Arts in Anthropology for Transfer (ADT: A.A.-T)

Program Description
This program emphasizes the development and diversity of, and adaptations in, human behavior and biology. Students in this program may study a variety of anthropological subfields, including Physical, Cultural, and Archaeology. In addition to acting as path for successful transfer to an institution offering a baccalaureate degree in Anthropology, the Associate in Arts in Anthropology for Transfer Degree provides students pursing any baccalaureate degree with basic skills in critical analysis, application of the scientific method, and cross-cultural understanding.

Associate in Arts in Anthropology for Transfer Degree
Upon completion of the Associate in Arts in Anthropology for Transfer Degree, students will be prepared to transfer to a CSU undergraduate Anthropology program. The Associate in Arts in Anthropology for Transfer Degree will facilitate successful transfer to the CSU system, allowing students to complete baccalaureate degrees in a more timely fashion.

To earn the Associate in Arts in Anthropology for Transfer degree, students must:
1. Complete 60 semester units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements
   b. A minimum of 18 semester units in a major or area of emphasis, as determined by the community college district.
2. Obtain a minimum grade point average of 2.0.

Program Outcomes
Students who complete the Associate in Arts in Anthropology for Transfer degree, will be able to:
1. Demonstrate an understanding of anthropology as a science, in particular with regard to major theories, methods, and applications.
2. Increase understanding of human biological and cultural diversity, and be able to discuss processes responsible for such variation.
3. Complete required anthropology (major) program courses.

REQUIRED COURSES . . . . **Units**
ANTH 001 Physical Anthropology 3
ANTH 002 Cultural Anthropology 3
ANTH 007 Archaeology 3
Select four units from List A 4
Select three to five units from List B. . . . . 3 - 5
Select three units from List C 3

List A (select a minimum of 4 units)
ANTH 001L Physical Anthropology Laboratory 1.5
MATH 011 Elementary Statistics 4

List B (select 3 – 5 units)
BIO 004 Human Anatomy. 5
GEOL 001 Physical Geology 3
GEOL 002 Geology Laboratory 1
GEOL 010 Introduction to Geographic
            Information Systems 3
PSYC 004 Research Methods in Behavioral Science 3

List C (select 3 units)
COMM 012 Intercultural Communication 3
SOC 001 Introduction to Sociology 3
GEOG 002 Cultural Geography 3
Required Major Total Units **19-23.5**
CSU General Education or IGETC Pattern Units . . **37-39**
CSU Transferable Electives
(as needed to reach 60 transferable units)* **5.5-21**
Total Degree Units. 60

* 10.5-19.5 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.

Anthropology

ANTH 001   3.0 Units
Physical Anthropology
Course Advisory: ENGL 001 with a minimum grade of C. This course is an introduction to the science of physical anthropology; covering the concepts, methods of inquiry, and scientific explanations of biological evolution and their application to the human species. Topics to be covered will include: the scientific method, genetics, principles and mechanisms of biological evolution, modern human variation and the race concept, biocultural adaptations, primate classification, comparative primate anatomy and behavior, and the fossil evidence for human evolution. *Three hours lecture.*

ANTH 001L   1.5 Units
Physical Anthropology Laboratory
Prerequisite: ANTH 001 with a minimum grade of C (may enroll concurrently). Course Advisory: Eligibility for ENGL 001 and MATH 330. This introductory laboratory course is designed to familiarize students with the methods and materials of physical anthropology, and is intended to be a companion course to ANTH 1 (Physical Anthropology). This course provides hands-on experience with genetics exercises as well as the skeletal materials of modern humans, non-human primates, and fossil hominins. Other topics discussed include the scientific method, sources of biological variation (with special focus on variation in humans and non-human primates) and the forces of evolution, biological classification of the primates, and non-human primate behavior. A field trip to may be required. *One-half hour lecture, three hours lab.*

ANTH 002   3.0 Units
Cultural Anthropology
Course Advisory: ENGL 001 with a minimum grade of C. This course in an introduction to the anthropological study of human culture; covering anthropological concepts such fieldwork, holism, the comparative method, cultural relativism, the nature of culture and cultural identity, and research ethics. Topics will include: subsistence patterns, political organizations including social inequality, kinship and family, communication, supernatural belief systems, gender and sexuality, art, culture change including globalization, and applied anthropology. *Three hours lecture.*

ANTH 007   3.0 Units
Archaeology
Course Advisory: SCC minimum English and Math standards. An introduction to the study of the concepts, theories, methods, and data of archaeology that contribute to our knowledge of human cultures. The course includes a discussion of the nature of scientific inquiry; the history and interdisciplinary nature of archaeological research; dating techniques; methods of survey, excavation, analysis, and interpretation; cultural resource management; professional ethics; and selected cultural sequences. Several key archaeological sites will be covered and will serve to illustrate central archaeological theories and methods. C-ID ANTH 150. *Three hours lecture.*

ANTH 049   2.0 Units
Anthropology Honors
Prerequisite: Completion of 24 units of college credit with a minimum GPA of 3.3; a minimum of 5 units in the discipline with a minimum grade of B; an ability to work independently; and permission of the School Dean based on instructor availability. Open to students qualified to do advanced work in the field. The program may include research, directed reading, field work, or other advanced study. *Six hours by arrangement.*

Art

Art - Two-Dimensional

Program Description
Students may select from several studio art programs: Art—Two-Dimensional; Art—Three-Dimensional; Graphic Arts; and Studio Arts for Transfer. Students earning an Associates Degree in Art—Two-Dimensional will also qualify for the Studio Arts for Transfer Degree (AA-T). However, the Art—Two-Dimensional degree is more rigorous than the AA-T degree, and provides a deeper foundation for student artists. These programs are designed to develop visual skills in a variety of art media.

Associate in Arts Degree
The Associate in Arts Degree can be obtained upon completion of 60 units, including the courses in the major for Art—Two-Dimensional general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Art Two-Dimensional Associate Degree will be able to:
1. Analyze, apply and integrate diverse visual experiences.
2. Develop and articulate with proficiency an understanding of visual and multi-cultural literacy.
3. Work independently and cooperatively to solve creative problems, applying critical thinking skills.

Students must complete courses in all of the following components according to the listed requirements in each.

REQUIRED COURSES . . . . **Units**
Foundation Component
ART 006 Design Principles in 2-Dimensions. 3.5
ART 007 Design-Color 3.5
ART 008 Design Principles in 3-Dimensions. 3.5

Drawing Component . . . . **Units**
ART 004 Life Drawing. . . . . 2 - 3.5
ART 014 Introduction to Drawing. . . . . 2 - 3.5

Art History Component (Select 6 units). . . . . **Units**
ART 002 Art History 3
AND
ART 001 Art History 3
OR
ART 003A Arts of Asia. 3
OR
ART 003B Arts of Africa, Oceania, and the Americas 3
OR
ART 011 Survey of Modern Ar 3
OR

One course from List A – Painting Component. 2-3.5
One course from List B – 2D Emphasis Component. . 2-3.5
One course from List C – Three-Dimensional
 Component 2-3.5
Total Units . . . . 26.5 – 34

List A: Painting Component (Select one course) . . . **Units**
ART 016 Beginning Painting . . . . 2 - 3.5
ART 017 Acrylic and Oil Painting . . . . 2 - 3.5
ART 021 Watercolor . . . . 2 - 3.5

List B: 2D Emphasis Component (Select one course) **Units**
ART 005 Life Drawing. . . . . 2 - 3.5
ART 015 Intermediate Drawing. . . . . 2 - 3.5
ART 018 Advanced Intermediate Painting:
 Acrylic and Oil Painting . . . . 2 - 3.5
ART 019 Figure Painting. . . . . 2 - 3.5
ART 020 Landscape Drawing and Painting
 —Reflections of Nature . . . . 2 - 3.5
ART 022 Watercolor . . . . 2 - 3.5
ART 038 Introduction to Printmaking 3.5
ART 058 Clothed Figure . . . . 2 - 3.5
ART 061 Collage & Assemblage. . . . . 2 - 3.5
ART 100 Color and Mixed Media Drawing . . . . 2 - 3.5
ART 145 Portrait Drawing and Painting. . . . . 2 - 3.5

List C: Three Dimensional Component
 (Select one course) . . . . **Units**
ART 023 Introduction to Ceramics:
 Hand Building . . . . 2 - 3.5
ART 026 Introduction to Ceramics:
 Wheel Throwing Techniques . . . . 2 - 3.5
ART 031 Sculpture . . . . 2 - 3.5

Art

Recommended Electives

ART 010 Art Appreciation
ART 012 Inside/Outside: The Cultures and
      Identities of Visual Artists in a Diverse America
ART 016 Beginning Painting
ART 018 Advanced Intermediate Painting:
      Acrylic and Oil Painting
ART 019 Figure Painting
ART 020 Landscape Drawing and Painting--
      Reflections of Nature
ART 021 Watercolor
ART 022 Watercolor
ART 024 Intermediate Ceramics: Hand Building
ART 025 Ceramic Design And Decoration:
      Hand Building Methods
ART 027 Intermediate Ceramics:
      Wheel Throwing Techniques
ART 028 Ceramic Design: Wheel Throwing Techniques

ART 032 Sculpture: Human Figure
ART 033 Intermediate Sculpture
ART 034 Ceramic Sculpture
ART 035A Introduction to Wood-Fired Ceramics
ART 037 Clay and Glazes for the Ceramic Artist
ART 039 Etching and Engraving: Line Techniques
ART 040 Etching and Engraving: Tone
ART 041 Etching and Engraving: Color
ART 042 Screen Printing
ART 043 Printmaking: Relief Printing, Including Woodcut
ART 058 Clothed Figure
ART 060 Exhibition Design
ART 061 Collage & Assemblage
ART 074 Kiln Design and Operation
ART 075 Art Studio Concepts
ART 100 Color and Mixed Media Drawing
ART 145 Portrait Drawing and Painting
PHOT 030 Beginning Photography

Art

Art - Three-Dimensional

Program Description
Students may select from several studio art programs: Art—Two-Dimensional; Art—Three-Dimensional; Graphic Arts; and Studio Arts for Transfer (AA-T). These programs are designed to develop visual skills in a variety of art media. Students completing the requirements for the associates degree in Art—Three-Dimensional will also meet requirements for the Studio Arts AA-T degree. Art—Three-Dimensional is a more rigorous program, giving student artists a deeper foundation for further study and artistic practice.

Associate in Arts
The Associate in Arts Degree can be obtained upon completion of 60 units, including the courses in the major for Art—Three-Dimensional, general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Art – Three Dimensional Associate Degree will be able to:
1. Analyze, apply and integrate diverse visual experiences.
2. Develop and articulate with proficiency an understanding of visual and multi-cultural literacy.
3. Work independently and cooperatively to solve creative problems, applying critical thinking skills.

Students must complete courses in all of the following components according to the listed requirements in each.

REQUIRED COURSES . . . . **Units**
Foundation Component
ART 006 Design Principles in 2-Dimensions 3.5
ART 007 Design-Color 3.5
ART 008 Design Principles in 3-Dimensions 3.5

Sculpture Component. . . . . **Units**
All of the following:
ART 031 Sculpture . . . . 2 - 3.5
ART 032 Sculpture: Human Figure . . . . 2 - 3.5

Art History Component . . . . **Units**
ART 002 Art History 3
ART 001 Art History 3
OR
ART 003A Arts of Asia 3
OR
ART 003B Arts of Africa, Oceania and the Americas 3
OR
ART 011 Survey of Modern Art 3
OR

Drawing Component . . . . **Units**
ART 014 Introduction to Drawing . . . . 2 - 3.5

One course from List A – Ceramics Component 2-3.5
One course from List B - Emphasis Component 2-3.5
One course from List C - Professionalism
    Component 2-3.5
    Total Units . . . . **29.5 – 37.5**

List A: Ceramics Component
    (Select one course). . . . . **Units**
ART 023 Introduction to Ceramics: Hand Building . 2 - 3.5
ART 024 Intermediate Ceramics: Hand Building . . . 2 - 3.5
ART 025 Ceramic Design And Decoration:
        Hand Building Methods . . . . 2 - 3.5
ART 026 Introduction to Ceramics:
        Wheel Throwing Techniques . . . . 2 - 3.5
ART 027 Intermediate Ceramics:
        Wheel Throwing Techniques. . . . . 2 - 3.5
ART 028 Ceramic Design:
        Wheel Throwing Techniques . . . . 2 - 3.5

List B: Emphasis Component (Select one course) . . **Units**
ART 029 Raku Pottery . . . . 2 - 3.5
ART 030 Architectural Ceramics, Murals and Tiles . 2 - 3.5
ART 033 Intermediate Sculpture . . . . 2 - 3.5
ART 034 Ceramic Sculpture . . . . 2 - 3.5
ART 035A Introduction to Wood-Fired Ceramics . . . 2 - 3.5
ART 036 Ceramic Surfaces - Drawing
        and Painting on Clay . . . . 2 - 3.5
ART 037 Clay and Glazes for the Ceramic Artist . . . 2 - 3.5
ART 074 Kiln Design and Operation. . . . . 2 - 3.5

List C: Professionalism Component
    (Select one course)**.** . . . . **Units**
ART 076A Portfolio Development – Artistic Inquiry . . . 3.5
ART 076B Portfolio Development: Documentation 3.5
ART 077A Professional Practices for Artists. 3
ART 077B Art on Site 3

Art

Recommended Electives
ART 004 Life Drawing
ART 005 Life Drawing
ART 010 Art Appreciation
ART 011 Survey of Modern Art
ART 012 Inside/Outside: The Cultures and
     Identities of Visual Artists in a Diverse America
ART 015 Intermediate Drawing
ART 024 Intermediate Drawing
ART 025 Ceramic Design and Decoration:
     Hand Building Methods

ART 027 Intermediate Ceramics:
     Wheel Throwing Techniques
ART 028 Ceramic Design: Wheel Throwing Techniques
ART 034 Ceramic Sculpture
ART 035A Introduction to Wood-Fired Ceramics
ART 037 Clay and Glazes for the Ceramic Artist
ART 039 Etching and Engraving: Line Techniques
ART 040 Etching and Engraving: Tone
ART 041 Etching and Engraving: Color
ART 042 Screen Printing
ART 043 Printmaking: Relief Printing, Including Woodcut
ART 060 Exhibition Design

Art

Art History

Program Description
This program provides the academic and practical experience to prepare students for a career, or further education at a four-year institution, in art history and related fields. By completing this program, students will also complete the requirements for the A.A.-T degree in Art History. However, this program is more rigorous than the A.A.-T degree, providing a broader founder for the Art History student.

Associate in Arts Degree
The Associate in Arts Degree can be obtained by completing a total of 60 units, including the 25-25.5 units for the major, the general education requirements, and electives. All courses in the major must be completed with a grade of C or better, or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Art History Associate Degree will be able to:
1. Analyze, apply and integrate diverse visual experiences.
2. Develop and articulate with proficiency an understanding of visual and multi-cultural literacy.
3. Work independently and cooperatively to solve creative problems, applying critical thinking skills.

REQUIRED COURSES . . . . **Units**
ART 001 Art History 3
ART 002 Art History 3
ART 014 Introduction to Drawing 3.5
Both classes from List A: Non-Western Art History 6
Select one class from List B:
    Modern, Contemporary, and Theory 3
Select one class from List C: Studio Art:
    Principles of Design 3.5
Select one class from List D: Diverse Media 3-3.5

List A: Non-Western Art History
    (both classes required) . . . . **Units**
ART 003A Arts of Asia 3
ART 003B Arts of Africa, Oceania, and the Americas 3
    Total Units . . . . **25 - 25.5**

List B: Modern, Contemporary, and Theory
    (select one course) . . . . **Units**
ART 011 Survey of Modern Art 3
ART 012 Inside/Outside: The Cultures and Identities
       of Visual Artists in a Diverse America 3

List C: Studio Art: Principles of Design
    (select one course) . . . . **Units**
ART 006 Design Principles in 2-Dimensions 3.5
ART 007 Design-Color 3.5
ART 008 Design Principles in 3-Dimensions 3.5

List D: Diverse Media (Select one course) . . . . **Units**
ART 023 Introduction to Ceramics: Hand Building . . 3-3.5
ART 026 Introduction to Ceramics:
       Wheel Throwing Techniques 3-3.5
ART 030A Architectural Ceramics,
       Murals and Tiles 3-3.5
ART 030B Mural Painting: History,
       Community, Practice 3.5
ART 038 Introduction to Printmaking 3.5
ART 056 Graphic Design I 3.5
PHOT 030 Beginning Photography 3
PHOT 070 Beginning Digital Photography 3

Art

Associate in Arts in Art History for Transfer

Program Description
This program provides the academic and practical experience to prepare students for a career, or further education at a four-year institution, in art history and related fields, such as museum studies, art education and administration. The Associate in Arts in Art History for Transfer provides the academic and practical experience to transfer into the CSU system to complete a baccalaureate degree that will prepare students for a career in the Art History industry. The Associate in Arts in Art History for Transfer degree is especially designed for students who plan to complete a bachelor's degree in Art History at a CSU campus.

Associate in Arts in Art History for Transfer
The Associate in Arts in Art History for Transfer degree is especially designed for students who plan to complete a bachelor's degree in Art History at a CSU campus. Students completing an Associate in Arts in Art History for Transfer degree are guaranteed admission to the CSU system, but not to a particular campus or major. Students transferring to a CSU campus that accepts the Associate in Arts in Art History for Transfer degree will be required to complete no more than 60 units after transfer to earn a bachelor's degree. Associate in Arts in Art History for Transfer degree also prepares students for art history degree programs at CSU institutions, but does not come with the same guarantees. In all cases, students should consult with a counselor for more information on university admission and transfer requirements.

To earn the Associate in Arts in Art History for Transfer degree, students must:
1. Complete 60 semester units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements
   b. A minimum of 18 semester units in a major or area of emphasis, as determined by the community college district.
2. Obtain a minimum grade point average of 2.0.

Program Outcomes
Students who complete the Associate in Arts in Art History for Transfer degree will be able to:
1. Analyze, apply and integrate diverse visual experiences.
2. Develop and articulate with proficiency an understanding of visual and multi-cultural literacy.
3. Work independently and cooperatively to solve creative problems, applying critical thinking skills.

REQUIRED COURSES . . . . **Units**
ART 001 Art History 3
ART 002 Art History 3
ART 014 Introduction to Drawing 3.5

Select 3 units from List A 3
Select 3 units from List B 3
Select 3 units from List C 3

List A: Non-Western Arts History (select 3 units)
ART 003A Arts of Asia 3
ART 003B Arts of Africa, Oceania, and the Americas 3

List B: Modern, Contemporary, and Theory
(select 3 units) . . . . **Units**
ART 011 Survey of Modern Art 3
ART 012 Inside/Outside: The Cultures and Identities
          of Visual Artists in a Diverse America 3

List C: Studio Art (select minimum of 3 units) . . . **Units**
ART 004 Life Drawing 3.5
ART 006 Design Principles in 2-Dimensions 3.5
ART 007 Design-Color 3.5
ART 008 Design Principles in 3-Dimensions 3.5
ART 016 Beginning Painting 3.5
ART 019 Figure Painting 3.5

ART 023 Introduction to Ceramics: Hand Building 3.5
ART 026 Introduction to Ceramics:
          Wheel Throwing Techniques 3.5
ART 031 Sculpture 3.5
ART 032 Sculpture: Human Figure 3.5
ART 038 Introduction to Printmaking 3.5
ART 039 Etching and Engraving: Line Techniques 3.5
ART 043 Printmaking: Relief Printing,
          Including Woodcut 3.5
ART 056 Graphic Design I 3.5
PHOT 030 Beginning Photography 3

Required Major Total Units . . . . **18.5 - 19**
CSU General Education or IGETC Pattern Units . . **37 - 39**
CSU Transferable Electives
(as needed to reach 60 transferable units)* . . . . . . **4.5 – 7.5**

Total Degree Units **60**

** 3 units may be double counted toward both the major area of
   emphasis and CSU General Education or IGETC Pattern.
   Consult with a counselor for more information on completing
   this degree.*

Art

Graphic Design & Illustration

Program Description
This program provides the student with sufficient academic and practical experience for entrance into the job market as a graphic artist, or for study towards the B.A. in college or professional school.

Associate in Arts Degree
The Associate in Arts Degree can be obtained by completing a total of 60 units, including the 27-31.5 unit major, the general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Graphic Design & Illustration Associate Degree will be able to:
1. Analyze, apply and integrate diverse visual experiences.
2. Develop and articulate with proficiency an understanding of visual and multi-cultural literacy.
3. Work independently and cooperatively to solve creative problems, applying critical thinking skills.

REQUIRED COURSES . . . . **Units**
ART 004 Life Drawing . . . . 2 - 3.5
OR
ART 015 Intermediate Drawing. . . . . 2 - 3.5
ART 006 Design Principles in 2-Dimensions. 3.5
ART 007 Design-Color 3.5
ART 014 Introduction to Drawing. . . . . 2 - 3.5
ART 052 Lettering and Layout. . . . . 2 - 3.5
ART 054 Illustration I 3.5
ART 055 Illustration II 3.5
ART 056 Graphic Design I 3.5
ART 057 Graphic Design II 3.5
    Total Units. . . . . 27 - 31.5

Recommended Electives
ART 001 Art History
ART 002 Art History
ART 003 World Art
ART 004 * Life Drawing
ART 005 Life Drawing
ART 010 Art Appreciation
ART 015 * Intermediate Drawing
ART 023 Introduction to Ceramics: Hand Building
ART 026 Introduction to Ceramics: Wheel Throwing
      Techniques
ART 031 Sculpture
ART 032 Sculpture: Human Figure
ART 038 Introduction to Printmaking
ART 041 Etching and Engraving: Color
BUS 181 Business Mathematics
CINA 010 The Art of Cinema
CINA 015 Film Production
DRFT 050 Basic Drafting
ENGL 051 Technical Writing
JOUR 060 Publications Laboratory
MKT 171 Introduction to Marketing
MKT 172 Market Management and Planning
OCED 090 Occupational Work Experience
OCED 091 General Work Experience
PHOT 030 Beginning Photography
TV 050 Survey of Broadcasting
TV 055 Beginning Television Production
TV 056 Advanced Television Production

*If not already taken as part of the major

Art

Associate in Arts in Studio Arts for Transfer

Program Description
This program provides the academic and practical experience to prepare students for a career, or further education at a four-year institution, in studio art. The program is designed for students to develop visual skills in a variety of art media.

Associate in Arts in Studio Arts for Transfer
The Associate in Arts in Studio Arts for Transfer is especially designed for students who plan to complete a bachelor's degree in Studio Art at a CSU campus. Students completing an Associate in Arts for Transfer degree are guaranteed admission to the CSU system, but not to a particular campus or major. Students transferring to a CSU campus that accepts the A.A. degree for Transfer will be required to complete no more than 60 units after transfer to earn a bachelor's degree. This degree also prepares students for studio art programs at other four-year institutions, but does not come with the same guarantees. In all cases, students should consult with a counselor for more information on university admission and transfer requirements.

To earn the Associate in Arts in Studio Art for Transfer degree, students must:
1. Complete 60 semester units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements
   b. A minimum of 18 semester units in a major or area of emphasis, as determined by the community college district.
2. Obtain a minimum grade point average of 2.0.

Program Outcomes
Students who complete the Associate in Arts in Studio Arts for Transfer degree will be able to:
1. Analyze, apply and integrate diverse visual experiences.
2. Develop and articulate with proficiency an understanding of visual and multi-cultural literacy.
3. Work independently and cooperatively to solve creative problems, applying critical thinking skills.

REQUIRED CORE . . . . **Units**
ART 002 Art History 3
ART 006 Design Principles in 2-Dimensions. 3.5
ART 008 Design Principles in 3-Dimensions. 3.5
ART 014 Introduction to Drawing 3.5
3 units from List A 3
9 units from List B 9

List A (choose three units) . . . . **Units**
ART 001 Art History 3
ART 003 World Art. 3
ART 011 Survey of Modern Art 3
ART 012 Inside/Outside: The Culture and Identities
            of Visual Arts in Diverse America. 3

List B (choose a minimum of 9 units) . . . . **Units**
ART 004 Life Drawing. . . . . 3 - 3.5
ART 005 Life Drawing. . . . . 3 - 3.5
ART 007 Design-Color 3.5
ART 015 Intermediate Drawing. . . . . 3 - 3.5
ART 016 Beginning Painting . . . . 3 - 3.5
ART 017 Acrylic and Oil Painting . . . . 3 - 3.5
ART 018 Acrylic and Oil Painting . . . . 3 - 3.5
ART 019 Figure Painting. . . . . 3 - 3.5
ART 021 Watercolor . . . . 3 - 3.5
ART 022 Watercolor . . . . 3 - 3.5
ART 023 Introduction to Ceramics: Hand Building . 3 - 3.5

ART 026 Introduction to Ceramics:
            Wheel Throwing Techniques . . . . 3 - 3.5
ART 031 Sculpture . . . . 3 - 3.5
ART 032 Sculpture: Human Figure . . . . 3 - 3.5
ART 034 Ceramic Sculpture . . . . 3 - 3.5
ART 038 Introduction to Printmaking 3.5
ART 039 Etching and Engraving: Line Techniques. . 3 - 3.5
ART 041 Etching and Engraving: Color . . . . 3 - 3.5
ART 043 Printmaking: Relief Printing,
            Including Woodcut . . . . 3 - 3.5
ART 052 Lettering and Layout. . . . . 3 - 3.5
ART 056 Graphic Design I 3.5
PHOT 030 Beginning Photography 3

Required Major Total Units . . . . **25.5 – 27**
CSU General Education or IGETC Pattern Units . **37 - 39**
CSU Transferable Electives
  (as needed to reach 60 transferable units)* . . . . **0 - 2**
Total Degree Units. **60**

* *6 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.*

Art

ART   001   **3.0 Units**
Art History
Course Advisory: Eligibility for ENGL 001. Explores the history of art in the Western World from the Paleolithic era through the Middle Ages. Focuses on the interrelation of art and culture, with a comparative study of select works of non-Western art. Field trip may be required. *Three hours lecture.*

ART   002   **3.0 Units**
Art History
Course Advisory: Eligibility for ENGL 001. Explores the history of Western Art through a critical analysis of Renaissance art through Post-Modern Art. Students will examine the connection between art and culture, and evaluate the historic, religious, and political influences on the artistic choices of diverse men and women of art history from the 15th century to today. Field trip may be required. C-ID ARTH 120. *Three hours lecture.*

ART   003   **3.0 Units**
World Art
Course Advisory: Eligibility for ENGL 001 and SCC minimum Math standard. A survey of the traditional arts of Asia, Africa, the Americas, and the Pacific Islands. Includes an exploration of recurrent themes in the art and architecture of non-Western cultures, as well as recurrent issues related to Western scholarship and exhibition of non-Western art. *Three hours lecture.*

ART   003A   **3.0 Units**
Arts of Asia
Course Advisory: Minimum Standards: ENGL 001 and SCC minimum Math standard. This course provides a survey of art and architecture from India, Southeast Asia, China, Korea, and Japan from pre-history to modern times. C-ID ARTH 130. *Three hours lecture.*

ART   003B   **3.0 Units**
Arts of Africa, Oceania, and the Americas
Course Advisory: Minimum Standards: ENGL 001 and SCC minimum Math standard. This course is a survey of the arts and architecture of Africa, Oceania, and the Americas, with an emphasis on traditional arts and practices. This course will also address issues related to the scholarship and display of these arts in the Western world. C-ID ARTH 140. *Three hours lecture.*

ART   004   **3.0 Units**
Life Drawing
Course Advisory: SCC minimum English standard. A study of the human figure in action and repose using a variety of drawing materials and approaches. Students work directly from the live model to develop skills using assignments which include gesture, line drawings, tone studies and the use of color. The student submits a midterm and final portfolio for evaluation. Field trip may be required. *Two hours lecture, four hours lab.*

ART   005   **3.0 Units**
Life Drawing - Intermediate
Prerequisite: ART 004 with a minimum grade of C. The continued study of the human figure with more advanced problems in drawing and composition. Following initial review, the student may choose an individual program of study with the approval of the instructor. Field trip may be required. *Two hours lecture, four hours lab.*

ART   006   **3.0 Units**
Design Principles In 2-Dimensions
Course Advisory: SCC minimum English standard. A fundamental study of visual elements and principles of design for production of art images in 2-dimensions using various materials in black and white. Design formats developed from historic and esthetic precepts are employed to investigate the relationship of form and content. Field trip may be required. C-ID ARTS 100. *Two hours lecture, four hours lab.*

ART   007   **3.0 Units**
Design-Color
Course Advisory: SCC minimum English standard. A study of the principles of additive and substractive color in two dimensions. Various theories of color will be studied including those of Albers and Ittens. Reference to the use of color in the dominant styles of art history will be made. Students will produce a portfolio of projects in applied color and the elements of design. Field trip may be required. C-ID ARTS 270. *Two hours lecture, four hours lab.*

Art

ART 008   **3.0 Units**
Design Principles In 3-Dimensions
Course Advisory: SCC minimum English standard. The fundamental study of visual elements and principles of design for production of art objects in three dimensions using various sculpture materials and methods. Design formats developed from historic and esthetic precepts are employed to investigate the relationships of form and content. Field trip may be required. C-ID ARTS 101. *Two hours lecture, four hours lab.*

ART 010   **3.0 Units**
Art Appreciation
Course Advisory: Eligibility for English 001. An introductory course examining the cultural, universal, and personal factors influencing the making and viewing of art. Includes a study of style, composition, materials and techniques used in the creation of art from disparate cultures and periods of history. Field trip may be required. *Three hours lecture.*

ART 011   **3.0 Units**
Survey Of Modern Art
Course Advisory: Eligibility for English 001. A study of the art and architecture of the major modern movements and artists from the 19th century and 20th centuries. Analysis of subject, form and content of paintings, photography and sculpture in lecture and audio visual presentation. Classes supplemented by field trips to current exhibitions. Written examinations and term paper required. Field trip may be required. *Three hours lecture.*

ART 012   **3.0 Units**
Inside/Outside:The Cultures And Identities Of Visual Artists
Course Advisory: English 001. An art survey course that examines and assesses three or more groups of culturally diverse artists, art organizations and support structures. Explores art issues related to social and historical trends in the U.S., including ways in which art may reflect and shape American attitudes towards ethnic identity, race, gender, culture and discrimination. Field trip may be required. *Three hours lecture.*

ART 014   **3.0 Units**
Introduction To Drawing
Course Advisory: SCC minimum English standard. A study of drawing as a means of expression with emphasis on the potential variety of forms and materials available to the artist. Students will create representational and abstract drawings from still life, the figure, nature and imagination. Observational drawing skills and technical skills will be developed. Field trip may be required. *Two hours lecture, four hours lab.*

ART 015   **3.0 Units**
Intermediate Drawing
Course Advisory: ART 014; SCC minimum English and Math standards. A basic drawing class which develops the concepts introduced in ART 014 on a more advanced level. Problems in observation and imagination and the translation of these experiences into graphic terms by exploration of line, shape, mass, space, texture, and light and shadow. Emphasis on composition and the development of a personal approach to drawing. Students will be required to submit a portfolio of assignments. Field trip may be required. C-ID ARTS 205. *Two hours lecture, four hours lab.*

ART 016   **3.0 Units**
Beginning Painting
Course Advisory: ART 014; SCC minimum English standard. Introduction to techniques and materials of painting in acrylic or oil. Designed for the student with limited experience in painting, this course includes color theory, composition, exposure to a variety of subject matters, and the development of skills for individual expression. Field trip may be required. *Two hours lecture, four hours lab.*

ART 017   **3.0 Units**
Intermediate Painting: Acrylic and Oil
Course Advisory: SCC minimum English standard, ART 016. A study of acrylic and oil painting techniques focusing on use of color, the medium and composition. A series of painting assignments designed to develop skills in both media. Field trip may be required. *Two hours lecture, four hours lab.*

Art

ART   018   **3.0 Units**
Advanced Intermediate Painting:
Acrylic and Oil
Prerequisite: ART 017 with a minimum grade of C. Course Advisory: SCC minimum English and Math standards. A study of color, composition and technique in oil or acrylic painting on an intermediate level. Students may choose to build on assignments from ART 017 or develop an outline of semester assignments appropriate to their interests and skill needs. Field trip may be required. *Two hours lecture, four hours lab.*

ART   019   **3.0 Units**
Figure Painting
Course Advisory: SCC minimum English standard. ART 016. A study of figure painting techniques. Students work directly from the model to develop skills in rendering and expression. Field trip may be required. *Two hours lecture, four hours lab.*

ART   020   **2.0 or 3.5 Units**
Landscape Drawing And Painting—
Reflections Of Nature
Course Advisory: SCC minimum English and Math standards. Focuses on the outdoors as subject matter. Frequent field trips and class exercises will introduce and expand the student's awareness and observational skills of the environment, in the tradition of Natural History as well as plein air (outdoor) art making. The student will reflect and translate these experiences into graphic terms using various media while considering line, shape, mass, space, texture, light, color, and shadow. The student will focus on composition and content while developing an understanding of the environment. Keeping a written and visual journal will also be a component of this class. This course will examine the interrelationships of humans and their surroundings, and the esthetics choices available with which to communicate our responses. *One or two hours lecture, three or four and one-half hours lab.*

ART   021   **3.0 Units**
Watercolor
Course Advisory: SCC minimum English standard. An introduction to the materials and techniques of transparent watercolor. Course includes basic composition, color study and an exploration of materials. Lectures, demonstrations and field study will supplement class assignments. Field trip may be required. *Two hours lecture, four hours lab.*

ART   022   **3.0 Units**
Watercolor - Intermediate
Prerequisite: ART 021 with a minimum grade of C. Course Advisory: SCC minimum English standard. A continuation of the study of basic watercolor techniques with emphasis on a more individual approach to the medium. The student and instructor develop a course of study that will focus on needs in the areas of skills and self-expression. Field trip may be required. *Two hours lecture, four hours lab.*

ART   023   **3.0 Units**
Introduction to Ceramics: Hand Building
Course Advisory: SCC minimum English standard. Covers basic construction methods of hand building and finishing pottery. Emphasis on form, craftspersonship and creativity. Building methods include pinch technique, coil building, and slab construction. Surface techniques include texture, stencil, slip, relief, stain, and glaze. Non-traditional construction and surface techniques will also be covered. Field trip may be required. *Two hours lecture, four hours lab.*

ART   024   **3.0 Units**
Intermediate Ceramics: Hand Building
Prerequisite: ART 023 with a minimum grade of C. Course Advisory: SCC minimum English standard. Continuation of ART 023 with emphasis on expanding skills, experimentation, design, craftspersonship, and creativity. Application of basic techniques to create finished art forms. Field trip may be required. *Two hours lecture, four hours lab.*

ART   025   **3.0 Units**
Ceramic Design And Decoration:
Hand Building Methods
Prerequisite: ART 024 with a minimum grade of C. Course Advisory: SCC minimum English standard. Emphasizes ceramic design problem-solving. Emphasis on creativity, design, honing skills, craftspersonship and experimentation. Ceramic art of the past as well as contemporary art is discussed. Loading and firing kilns, formulating glazes and mixing clay bodies are also covered. Builds on fundamental skills covered in Art 023 and Art 024. Field trip may be required. *Two hours lecture, four hours lab.*

Art

ART   026   3.0 Units
Introduction to Ceramics:
Wheel Throwing Techniques
Course Advisory: SCC minimum English standard.
Introduction to basic wheel throwing techniques.
Emphasis on form, craftspersonship, and creativity.
Surface techniques include texture, stencil, slip, relief,
stain, and glaze. Non-traditional construction and
surface techniques will also be covered. *Two hours
lecture, four hours lab.*

ART   027   2.0 or 3.5 Units
Intermediate Ceramic/Wheel Throwing
Techniques
*Prerequisite: ART 026 with a minimum grade of C. Course
Advisory: SCC minimum English standard.* Continuation
of ART 026 with emphasis on expanding skills,
experimentation, design, craftspersonship, and
creativity. Application of basic techniques to create
finished art forms. Field trip may be required. *Two
hours lecture, four hours lab.*

ART   028   3.0 Units
Ceramic Design: Wheel Throwing Techniques
*Prerequisite: ART 027 with a minimum grade of C. Course
Advisory: SCC minimum English standard.* Emphasizes
ceramic design problem-solving. Emphasis on
creativity, design, honing skills, craftspersonship and
experimentation. Ceramic art of the past as well as
contemporary art is discussed. Loading and firing
kilns, formulating glazes and mixing clay bodies are
also covered. Builds on fundamental skills covered in
ART 026 and ART 027. Field trip may be required. *Two
hours lecture, four hours lab.*

ART   029   2.0 or 3.0 Units
Raku Pottery
*Course Advisory: SCC minimum English standard. ART
023 or ART 026 (one college level ceramics course).* Covers
the ancient and contemporary art of Raku. Topics
include techniques of forming clay, the formulation of
clay bodies and glazes for Raku, kiln construction,
firing, post firing, Eastern and Western aesthetics, and
the history of Raku. The course will not cover basic
ceramic construction techniques. Students should
already be familiar with basic hand building or wheel
throwing techniques. Field trip may be required. *One
to two hours lecture, three to four hours lab.*

ART   030A   2.0 or 3.0 Units
Architectural Ceramics, Murals and Tiles
*Course Advisory: SCC minimum English standard. ART
023 or ART 026 (one college level ceramics course).* This
course will investigate the history, contemporary
examples, materials, techniques and the vast range of
artistic expression possible in architectural ceramics,
ceramic murals and tiles. The course will not cover
basic ceramic construction techniques. Students
should already be familiar with basic hand building or
wheel throwing techniques. Student should expect to
incur materials and equipment costs typical of a studio
art course. Field trips may be required in this course.
One or two hours lecture, three or four hours lab.

ART   030B   3.0 Units
Mural Painting: History, Community, Practice
This course explores the cultural history of mural
painting as well as the social and political issues
related to the creation and public reception of mural
paintings. Students will apply aesthetic as well as
conceptual analyses to the design and creation of a
full-scale mural. Through both study and practice,
students will consider the importance of the
community in the mural-making process. Course
requires field trips. Students will travel to view murals
in the Bay Area. Murals may be painted at a site off-
campus. *Four hours lecture, eight hours of lab (8-week
course).*

ART   031   3.0 Units
Sculpture
Course Advisory: SCC minimum English standard.
Introduction to sculpture methods and materials.
Emphasis on principles of three dimensional design
and the interrelationship of form, content and context.
Sculpture methods to be covered include modeling,
mold making, welding, assemblage, and construction
with a variety of materials. Various sculpture methods
are practiced with attention to creative self-expression
and historical context. Field trip may be required. *Two
hours lecture, four hours lab.*

ART   032   **3.0 Units**
Sculpture—Human Figure
Course Advisory: SCC minimum English standard. Study of the human form in sculpture. Students will create both realistic and abstract sculpture of the human form in a variety of materials. Field trip may be required. *Two hours lecture, four hours lab.*

ART   033   **3.0 Units**
Intermediate Sculpture
Prerequisite: ART 031 or ART 032 or ART 034 with a minimum grade of C. Course Advisory: SCC minimum English standard. Further development of concepts and skills presented in ART 031 and 032. Emphasis is placed on individual expression. A variety of materials, methods, and sculptural concepts are explored. Field trip may be required. *Two hours lecture, four hours lab.*

ART   034   **3.0 Units**
Ceramic Sculpture
Course Advisory: SCC minimum English standard. Introduction to basic sculpture concepts, materials, and approaches with an emphasis on ceramics. Subjects to be covered include: Historic and contemporary approaches to ceramic sculpture, slab construction, coil building, mold making, extruded fabrication, modeling from the figure, introduction to ceramic color, characteristics and limitations of ceramic materials. Field trip may be required. *Two hours lecture, four hours lab.*

ART   035A   **3.0 Units**
Introduction to Wood-Fired Ceramics
Course Advisory: SCC minimum English and Math standards. Covers the ancient and contemporary art of wood- fired ceramics. Topics include techniques of forming clay, the formulating of clay bodies and glazes for wood fire, kiln construction, wood firing techniques, Eastern and Western aesthetics and the history of wood-fired ceramics. The course will not cover basic ceramic construction techniques. Students should already be familiar with basic hand building or wheel throwing techniques. *Two hours lecture, four hours lab.*

ART   036   **2.0 or 3.0 Units**
Ceramics Surfaces - Drawing and Painting on Clay
Course Advisory: SCC minimum English and Math standards. This course in ceramic surface design will explore the vast range of artistic expression possible with ceramic slips, stains, glazes and firing techniques at low medium and high temperature ranges. The course will not cover basic ceramic construction techniques. Students should already be familiar with basic hand building or wheel throwing techniques. Field trip may be required. *One or two hours lecture, three or four hours lab.*

ART   037   **2.0 or 3.0 Units**
Clay and Glazes for the Ceramic Artist
Prerequisite: ART 023 or 026 with a minimum grade of C or equivalent. Course Advisory: SCC minimum English and Math standards. Covers and investigates the theoretical and practical aspects of clay and glaze formulation. Topics covered include: Clay/glaze fit, glaze calculation, testing strategies, the development of color, the development of texture, kiln types, kiln temperatures and kiln atmosphere. Field trip may be required. *One or two hours lecture, three or four hours lab.*

ART   038   **3.0 Units**
Introduction to Printmaking
Course Advisory: SCC minimum English and Math standards. Explores traditional and contemporary approaches to etching (Intaglio), lithography, and relief (woodcut and linoleum) printing. Digital and new methods of photographic printmaking are discussed and demonstrated. This course is project oriented to enable the student to develop a portfolio of completed works in various mediums. Field trip may be required. *Two hours lecture, four hours lab.*

ART   039   **3.0 Units**
Etching and Engraving: Line Techniques
Course Advisory: SCC minimum English standard. Covers history and techniques of line etching and engraving, including dry point, sugar lift line etching, and soft ground line variations. The student is expected to produce matted prints of completed projects. Field trip may be required. *Two hours lecture, four hours lab.*

Art

ART 040   **3.0 Units**
Etching and Engraving: Tone
Course Advisory: SCC minimum English standard.
Includes etching and engraving techniques such as
aquatint, featherbiting, spit bite, and soft ground
which produce tones that have gray and black areas
defining line etchings. The student will prepare a
portfolio of completed projects. Field trip may be
required. *Two hours lecture, four hours lab.*

ART 041   **3.0 Units**
Etching and Engraving: Color
*Course Advisory: SCC minimum English and Math
standards.* Includes etching and engraving techniques
and their history, including the use of multiple plates
for each color used on the key plate. Some color plate
methods covered include a la poupee, monotype,
chine colle, color rollings, and viscosity printing. The
student will prepare a portfolio of completed projects.
Field trip may be required. *Two hours lecture, four hours
lab.*

ART 042   **3.0 Units**
Screen Printing
*Course Advisory: SCC minimum English and Math
standards.* Screen printing techniques from paper
stencils and pochoir to photographic and digital
processes. Students are expected to develop a portfolio
of prints that emphasizes the exploration of personal
content while employing advanced screen techniques
and related digital processes. The course will consist of
studio production, lectures on contemporary and
historical screen printing, demonstrations and
critiques. Field trip may be required. *Two hours lecture,
four hours lab.*

ART 043   **3.0 Units**
Print Making: Relief Printing, Including Woodcut
*Course Advisory: SCC minimum English and Math
Standards.* A general introduction to printmaking - the
history, development, techniques, and processes.
Emphasis is on an in-depth study and application of
various relief methods (embossing, collagraph,
linoleum cut, woodcut, and non-traditional methods)
along with an investigation of relevant image source
and development. Field trip may be required. *Two
hours lecture, four hours lab.*

ART 045A   **3.0 Units**
Graphic Design I
Provides fundamental background for terminal and
transfer students planning to enter the graphic design
field. Instruction in the professional use of design,
lettering, and illustration through solution of visual
communication problems. *Two hours lecture, four
hours lab.*

ART 045B   **3.0 Units**
Graphic Design II
*Prerequisite: ART 056 with a minimum grade of C. Course
Advisory: SCC minimum English and Math standards.*
Computer design and production methods for print
and digital mediums using Macintosh computers and
Adobe and other software programs for layout,
illustration, typography, and animation. Graphic
design principles are stressed. *Two hours lecture, four
hours lab.*

ART 045C   **3.0 Units**
Typography
*Course Advisory: Completion of English 001 with a
minimum grade of C.* Typography fundamentals course
covering the history, theory and study of letterforms
and type design, using both traditional and digital
media. Studies will include typographic
characteristics, the relationship between type and
image, principles of legibility, visual hierarchy, and
grid systems. Field trip may be required. *Two hours
lecture, four hours lab.*

ART 046   **3.0 Units**
Illustration I
Course Advisory: SCC minimum English standard.
Problems in design and rendering of illustration
for print and film media. Projects may include
illustrations for books, magazines, advertising and
film. Field trip may be required. *Two hours lecture, four
hours lab.*

ART 046C   **3.0 Units**
Illustration II
*Prerequisite: ART 054 with a minimum grade of C or
equivalent as determined by portfolio review. Course
Advisory: SCC minimum English standard.* Studio
illustration conception, production and finish.
Students will execute illustration projects using
professional procedures and equipment. Emphasis is
on student creative and technical development.
Written papers and portfolio review required. *Two
hours lecture, four hours lab.*

Art

ART   049   1.0 to 3.0 Units
Art Honors
Prerequisite: Completion of 24 units of college credit with a minimum GPA of 3.3; a minimum of 5 units in the discipline with a grade of 'B' or better; an ability to work independently; permission of the School Dean based on instructor availability. An independent study course designed for sophomores or students who have taken many of the basic classes and wish to continue work with an instructor in a specialized area. The student works by arrangement with the instructor on an outlined program of study. Students may take this course up to the maximum number of units over multiple semesters. *Three to nine hours by arrangement.*

ART   058   3.0 Units
Clothed Figure
Course Advisory: SCC minimum English standard. Course emphasis is on understanding the various properties of clothing and drapery, as used with the figure in painting and drawing. Gesture, proportion, form and color will be studied in relation to the clothed figure. Projects will include a variety of costume statements including fashion, sport, fantasy or science fiction and theatre costume. *Two hours lecture, four hours lab*

ART   060   1.0 to 3.0 Units
Exhibition Design
Course Advisory: Eligibility for English 001. Provides fundamentals of designing exhibitions in galleries, museum, and alternative spaces. Students will gain experience developing exhibitions for the Herger Gallery (Fairfield Campus) and Centers. Topics covered include selection, design and installation of exhibitions; defining the mission of a gallery; public relations; and career opportunities. Field trip may be required. *One to three hours lecture.*

ART   061   3.0 Units
Collage and Assemblage
Course Advisory: SCC minimum English standard. Explores the making of 2D and 3D collages and assemblages in a variety of media. Addresses the history and prevalence of collage thinking as an approach to art making while integrating traditional drawing and painting skills. Field trip may be required. *Two hours lecture, four hours lab.*

ART   064   3.0 Units
Monotype/Monoprint
Course Advisory: SCC minimum English and Math standards. This course will focus on the unique print. Study will include history and development of this form in relation to print tradition. Development of press skills in single-drop and multi-drop printing is required. A portfolio of printing techniques including direct, indirect and combination prints will be required. Field trip may be required. *Two hours lecture, four hours lab.*

ART   065   3.0 Units
Book Making
Course Advisory: SCC minimum English and Math standards. Explores book making in a variety of formats. Discussion of the history and development of the book is included. Students will make several books: Classic signature book bound between boards, side bound books and a variety of artist's books including altered books, boxed books, and 3 dimensional book structures like accordion books and pop-up books. Field trip may be required. *Two hours lecture, four hours lab.*

ART   066A   2.0 Units
Travel Study- Topics in Studio Art
Course Advisory: SCC minimum English standard. Designed to offer study in a wide range of topics related to the studio practice of 2-D art, allowing for concentrated exploration of a topic not normally treated in any depth in a survey class. The content will vary each semester and will be described in the Schedule of Classes. Course requires travel and additional expense; check with instructor for further information. *Eight hours lecture and twenty-four hours lab. (2-week course).*

Art

ART 066B   **1.0 to 3.0 Units**
Travel Study- Topics in Art History
Course Advisory: Eligibility for English 001. This Travel Study course offers students the opportunity to study art in person. Lectures will be held at museums, archaeological sites, and other venues with art historical significance. The specific topic of art history study will vary from term to term, according to the featured travel destination and selection of sites. Studying art in context will allow a concentrated exploration of a topic not usually discussed in-depth in a survey class. The destination(s) and topic for each semester will be described in the Schedule of Classes. Course requires travel and additional expense; check with instructor for further information. *Minimum four hours lecture and maximum twelve hours lecture (4-week course).*

ART 074   **2.0 or 3.00 Units**
Kiln Design and Operation
Course Advisory: SCC minimum English and Math standards. ART 023 or ART 023 (one college level ceramics course). This course in kiln design and operation will investigate the vast range kiln designs, their operation and the opportunities each offers for artistic expression. Kiln designs covered will include natural gas, propane, electric, raku, salt, wood, and alternative kilns. Students will be able to determine which kilns and which firing strategies are best suited to their current artistic vision. The course will not cover basic ceramic construction techniques. Students should already be familiar with basic hand building or wheel throwing techniques. Field trips may be required. *One or two hours lecture, three or four hours lab.*

ART 075   **2.0 or 3.0 Units**
Art Studio Concepts
Course Advisory: SCC minimum English standard. Intensive study in visual arts studio. Exposure to contemporary art directions, trends and selected topics. Different studio problems will be investigated each semester. Field trips may be required. *One or two hours lecture, three or four hours lab.*

ART 076A   **3.0 Units**
Portfolio Development - Artistic Inquiry
Course Advisory: SCC minimum English standard. This is an advanced course designed to serve the student in the preparation of a professional fine art portfolio consisting of a body or series of work. Emphasis is placed on 1) individual expression of an artistic vision, 2) idea development 3) artistic inquiry 4) setting and meeting artistic goals and timelines for the production of a body or series of work. For this course the student should have the necessary skills, art making experience and motivation to work independently, with expert consultation by the instructor, on developing a coherent body of work. This course is the first in a two part course offering completed by Portfolio Development - Documentation. Student should expect to incur materials and equipment costs typical of a studio art course. Field trip may be required. *Two hours lecture, four hours lab.*

ART 076B   **3.0 Units**
Portfolio Development: Documentation
Course Advisory: SCC minimum English standard. At least 3 courses in designated studio art focus of the semester. This is an advanced course designed to serve the student in the preparation of a professional fine art portfolio consisting of a body or series of work. Emphasis is placed on 1) individual expression of an artistic vision, 2) professional quality documentation and presentation of artwork and 3) capacity to communicate both verbally and in writing about artwork produced. For this course the student should have the necessary skills, art making experience and motivation to work independently, with expert consultation by the instructor, on developing a coherent body of work. This course is the second in a two part course offering following Portfolio Development - Artistic Inquiry. Student should expect to incur materials and equipment costs typical of a studio art course. Field trip may be required. *Two hours lecture, four hours lab.*

Art

ART   077A   **3.0 Units**
Professional Practices for Artists
Course Advisory: SCC minimum English standard. This course is designed to provide the skills and information to serve the student in developing a professional art career. Topics include: How to approach galleries, institutions, universities, art schools, and potential employers. Techniques for promoting art for employment or transfer to four year schools, portfolio preparation, resume writing, artist statement and biography composition, sales and pricing of art, business basics, entrepreneurship, public relations, art on the internet, planning and goal setting, contracts, taxes, grant getting, display, shipping, sustaining creativity. Evaluation of marketing and promotional concepts. Recommended for all art and design majors seeking to become professionals. Field trips may be required. *Three hours lecture.*

ART   077B   **3.0 Units**
Art on Site
Course Advisory: SCC minimum English standard. Art on Site is a movable feast. We will visit artists, gallery owners, museum curators and art administrators on site, at their studios, galleries museums and offices. This will be a forum for students to hear first hand from artists, arts scholars and other art professionals discussing and contextualizing their work within the contemporary art field. Includes multiple lecturers by visitors and additional class lectures providing further context. Exposure to contemporary art directions, trends and job markets. This course requires extensive field trips to destinations in the greater Sacramento and Bay Area. *Three hours lecture.*

ART   100   **2.0 or 3.0 Units**
Color and Mixed Media Drawing
Course Advisory: SCC minimum English standard. Course focuses on the use of a variety of drawing materials and techniques with special attention to color theory. Lectures, demonstrations and field study will supplement class assignments. Field trip may be required. *One or two hours lecture, three or four hours lab.*

ART   145   **2.0 or 3.0 Units**
Portrait Drawing and Painting
Course Advisory: ART 014. A multi-faceted course addressing the representation of likeness portrait study. Includes anatomy and work with live models, self-portraits and portraits of others. Issues of gender, ethnic identity, youth and aging, stereotyping and caricature will be presented in historical and contemporary contexts. Portrait work will be explored in a variety of stylistic formats from observational likeness to expressionistic images to symbolic portraits. Work in a variety of media is required. Field trip may be required. *One or two hours lecture, three or four hours lab.*

Automotive

Automotive Body and Repair

Program Description
This program is designed to prepare the student for employment as a body repair and paint apprentice in privately owned repair shops or automotive dealerships. A student could be self-employed from the training after completing the program.

Certificate of Achievement and Associate Degree in Science
A Certificate of Achievement can be obtained by completing the 46-unit major below. The Associate in Science Degree can be obtained by completing 67 units, including the major and the general education requirements. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Automotive Body and Repair Certificate of Achievement/ Associate Degree will be able to:
1. Demonstrate knowledge of metal joining and straightening methods.
2. Inspect, remove, install, align panels, doors and trim to meet shop standards
3. Determine type of paint; plan refinishing system; remove, prepare, seal and mask; apply coatings to vehicle.
4. Demonstrate correct use of chemicals within the shop environment.
5. Work safely and responsibly within all safety and environmental guideline standards for a shop.
6. Identify and strategize career plans for employment in the auto collision field.

REQUIRED COURSES . . . . **Units**
AUTB 100 Fundamentals of Auto Body Repair 10
AUTB 101 Spray Paint Theory and Techniques 10
AUTB 102 Automotive Body Panels
         and Frame Straightening 10
AUTB 103 Advanced Auto Body Repair and Painting . . 10
IT 140 Industrial Materials 3
IT 150 Industrial Processes 3
    Total Units **46**

Some courses may not be offered. Please contact the Dean of Applied Technology and Business for alternate courses if necessary.

Recommended Electives
BUS 005 Introduction to Business
DRFT 079 Blueprint Reading
IT 110 Modern Welding
OCED 070 Occupational Soft Skills
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Automotive Body & Repair."

Automotive

Automotive Technician

Program Description
This program is designed to prepare graduates for employment in the automotive industry as apprentice mechanics, parts people, service station attendants or specialists in one of the many areas in, or jobs related to, the automotive industry.

Certificate of Achievement and Associate of Science Degree
A Certificate of Achievement can be obtained by completing the 40-unit major below. The Associate in Science Degree can be obtained upon completion of 61 units, including the major, and the general education requirements. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Automotive Technician Certificate of Achievement/Associate Degree will be technically proficient in entry level skills as defined by the National Automotive Technician's Education Foundation. (NATEF) by demonstrating:
    1. 85 percent of the tasks established by NATEF.
    2. Proper service and repair procedures of the following systems:
        • Engine Repair
        • Automatic Transaxles/Transmissions
        • Manual Drivetrain
        • Suspension, Steering and Alignment
        • Brakes
        • Electrical Systems
        • Heating and Air Conditioning
        • Engine Performance
    3. Proper safety procedures and techniques.
    4. Efficient oral and written communication.
    5. The ability to apply fundamental automotive technology principles.
    6. Skills for successful employment in the field of Automotive Mechanics Repair Technology.

REQUIRED COURSES . . . . **Units**
ATEC 130 Automotive Systems 10
ATEC 131 Automotive Electrical Systems 10
ATEC 132 Automotive Brakes and
        Suspension Systems. 10
ATEC 133 Internal Combustion Engines
        and Power Transmission 10
    Total Units 40

Recommended Electives
BUS 005 Introduction to Business
IT 110 Modern Welding
IT 140 Industrial Materials
OCED 070 Occupational Soft Skills
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Automotive Technician."

Automotive

Automotive Technician

(For additional listings see "Industrial Education" section of this catalog.)

ATEC   070   3.0 Units
Automotive Fundamentals
Course Advisory: SCC minimun English and Math standards. This course serves as the pre-requisite for all automotive technology certificate and/or degree applicable courses and provides the knowledge and skills needed to prepare students for entry into the automotive core curriculum. The study of automotive industry fundamentals including careers; safety; fasteners; hand tool identification and usage; vehicle systems; electrical fundamentals; service information access and use; automotive chemical and fluid applications; hazardous waste handling; general shop equipment usage, and vehicle servicing. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will in part prepare the student for the ASE Maintenance and Light Repair G1 Certification Examination. *Two hours lecture, three hours lab.*

ATEC   130   4.0 Units
Automotive Suspension and Steering
Prerequisite: ATEC 070 with a minimum grade of C (may be taken concurrently). Course Advisory: ATEC 131 Automotive Electical Systems, and SCC minimum English and Math standard. The study of automotive suspension and steering fundamentals including: Diagnosis, inspection, repair, and adjustment of modern automotive steering, suspension, supplemental restraint, tire pressure monitoring, and alignment systems. Theory of operation, common automotive steering and suspension systems, wheel alignment principles, methods of diagnosis, adjustment and repair, and the use of suspension service equipment will be covered. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will in part prepare the student for the ASE Suspension and Steering A4 Certification Examination. *Two hours lecture, six hours lab.*

ATEC   131   4.0 Units
Automotive Electrical Systems
Prerequisite: ATEC 070 with a minimum grade of C (may be taken concurrently). Course Advisory: SCC minimum English and Math standard. A course covering theory and principles of automotive electrical systems. The course includes basic electrical theory, Ohm's Law, series and parallel circuits, electrical symbols and schematics, automotive batteries, charging systems, voltage regulation, starting systems, lighting systems, and various accessory systems. The laboratory portion of the course will place emphasis on diagnosis and testing techniques required to effectively determine the necessary action in an electrical system failure. The use of schematics, technical specifications, voltmeters, ohmmeters, ammeters, and circuit testers will be required. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will in part prepare the student for the ASE Electrical / Electronic A6 Certification Examination. *Two hours lecture, six hours lab.*

ATEC   132   4.0 Units
Automotive Brake Systems
Prerequisite: ATEC 070 with a minimum grade of C (may be taken concurrently). Course Advisory: ATEC 131 Automotive Electrical Systems, and SCC minimum English and Math standard. The study of modern automotive braking systems. Hydraulic principles, coefficients of friction, and thermodynamics will be discussed. Diagnosis, repair, overhaul, and adjustment procedures of drum, disc/drum, and four-wheel disc systems will be emphasized. Anti-lock Braking Systems (ABS) diagnostics, servicing, and repair procedures will also be covered. The course will cover common domestic and import passenger vehicles, and light trucks only. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will prepare the student for the ASE Brakes A5 Certification Examination. *Two hours lecture, six hours lab.*

Automotive

ATEC 133   **4.0 Units**
Automotive Engine Repair
Prerequisite: ATEC 070 with a minimum grade of C (may be taken concurrently). Course Advisory: ATEC 131 Automotive Electical Systems, and SCC minimum English and Math standard. The study of four stroke combustion cycle theory, engine torque, horsepower, materials, and manufacturing processes as they relate to internal combustion powerplants used in production automobiles and light trucks. The theory, principles, and diagnosis of cooling systems, lubrication systems, and common engine mechanical failures will be emphasized. The laboratory portion of the course will focus on comprehensive engine testing, in-vehicle engine servicing, engine disassembly / reassembly, precision measuring, and inspection of internal engine components. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will prepare the student for the ASE Engine Repair A1 Certification Examination. *Two hours lecture, six hours lab.*

ATEC 134   **4.0 Units**
Automatic Transmissions/Transaxles
Prerequisite: ATEC 070 with a minimum grade of C (may be taken concurrently). Course Advisory: ATEC 131 Automotive Electrical Systems, and SCC minimum English and Math standards. The study of hydraulic and electronically actuated automatic transmissions and transaxles. Topics will include positive and variable displacement pumps, torque converters, bands and clutches, hydraulic valves, electronic shift solenoids, governors, and common compound planetary gear arrangements. The laboratory portion of the course will focus on diagnostic and overhaul procedures, in-vehicle testing, and bench testing of various components. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will prepare the student for the ASE Automatic Transmission A2 Certification Examination. *Two hours lecture, six hours lab.*

ATEC 135   **4.0 Units**
Automotive Engine Performance
Prerequisite: ATEC 070 with minimum grade of C (may take concurrently), or equivalent. Course Advisory: SCC minimum English and Math standards. ATEC 131. Lecture, demonstration and practical lab experience in the operation, troubleshooting and repair of the ignition, fuel and emission control systems of import and domestic passenger vehicles and light trucks. Emphasis is on theoretical knowledge and the proper use of diagnostic tools and equipment. Prerequisite: ATEC 070 or equivalent (may be taken concurrently). The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently, will in part, prepare the student for the ASE Engine Performance A8 Certification Examination. *Two hours lecture, six hours lab.*

ATEC 136   **4.0 Units**
Automotive Manual Drivetrain and Axles
Prerequisite: ATEC 070 with a minimum grade of C (may be taken concurrently). Course Advisory: SCC minimum English and Math standards. A course covering theory and principles of manual transmissions / transaxles, clutches, driveshafts, half shafts, variable and constant velocity joints, differentials, rear wheel drive axle assemblies, all wheel drives, and four wheel drives. Gear types, ratios, and noise, vibration, harshness diagnostic routines will be discussed. Diagnosis, repair, overhaul, and adjustment procedures for common domestic, import, and light truck drivetrain components will be emphasized. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will prepare the student for the ASE Manual Transmission / Transaxle & Drivetrain A3 Certification Examination. *Two hours lecture, six hours lab.*

Automotive

ATEC 137   **4.0 Units**
Automotive Heating and Air Conditioning
Prerequisite: ATEC 070 with a minimum grade of C, may be taken concurrently. An Automotive Technology course covering theory and operation of automotive heating systems and air conditioning refrigeration systems. Topics will include the refrigeration cycle, evacuation principles, humidity, heat transfer, automotive refrigerants, temperature pressure relationship, greenhouse gases, and proper handling and storage of refrigerants. The laboratory portion of the course will focus on the diagnosis and repair of heating and cooling systems, use of refrigerant recycling-reclaiming equipment, use of evacuation equipment, retrofitting, and environmentally sound refrigeration handling techniques. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently, will prepare the student for the ASE A7 Air Conditioning and Heating Certification Examination. *Two hours lecture, six hours lab.*

ATEC 138   **4.0 Units**
Automotive Electronics
Prerequisite: Minimum grade of C in both ATEC 070 and ATEC 131. Emphasis on applied techniques in schematic reading, scan tool usage and diagnosis of various automotive electronic systems, including power doors, mirrors, windows and seats; sun roofs; air bags; keyless entry; networks and other body control electronics. This course builds on the concepts introduced in Automotive Electrical Systems. The course is designed in conjunction with Automotive Service Excellence (ASE) standards and subsequently will in part prepare the student for the ASE Electrical / Electronic A6 Certification Examination. *Two hours lecture, six hours lab.*

ATEC 139   **4.0 Units**
Advanced Engine Performance
Prerequisite: Complete each ATEC 070, ATEC 131 and ATEC 135 with a minimum grade of C. Emphasis on applied techniques in advanced engine performance systems diagnostics including fuel injection; ignition; emission controls; OBD II and CAN/BUS. The course is correlated with the National Institute for Automotive Service Excellence standards and is designed to prepare the student for the ASE A8 and L1 Engine Performance Certification Examination series. *Two hours lecture, six hours lab.*

ATEC 140   **2.0 Units**
Hybrid Vehicle Maintenance and Repair
Course Advisory: SCC minimum English and Math standards with a minimum grade of C. Study of hybrid vehicles, safety issues associated with hybrid vehicles, maintenance and repair procedures specific to hybrid vehicles. *One hour lecture, three hours lab.*

Automotive Body and Repair

(For additional listings see "Industrial Education" section of this catalog.)

AUTB 100   **10.0 Units**
Fundaments of Auto Body Repair
Course Advisory: SCC minimum English standard. Acquaints the student with the basic skills and fundamental principles of auto body repair. Learned skills are verified through manipulative and written tests. *Five hours lecture, fifteen hours lab.*

AUTB 101   **10.0 Units**
Spray Paint Theory and Techniques
Prerequisite: AUTB 100. Course Advisory: SCC minimum English standard. Acquaints the student with the basic principles and techniques of automotive refinishing. Skills acquired are verified through manipulative projects and written tests. *Five hours lecture, fifteen hours lab.*

AUTB 102   **10.0 Units**
Automotive Body Panels and Frame Straightening
Prerequisite: AUTB 100. Students will learn to repair and replace body panels. Includes unibody and frame straightening. Learned skills are verified through manipulative projects and written exams. *Five hours lecture, fifteen hours lab.*

AUTB 103   **10.0 Units**
Advanced Auto Body Repair and Painting
Prerequisite: AUTB 101, 102. Students are exposed to the fine details of automotive body repair. Excellence and precision of skills are refined and quality work is emphasized. Students demonstrate their achievements through manipulative projects and written tests. *Five hours lecture, fifteen hours lab.*

AUTB 110   **3.0 Units**
Special Projects
Prerequisite: AUTB 103. Advanced projects undertaken by students in their field of specialization, under supervision of the instructor. *Two hours lecture, three hours lab.*

Biology

Biology

Program Description
The biology program emphasizes the relationship between structure and function of living systems and the concept that biological processes can be studied at different levels of organization. The program provides a balanced blend of mathematics, chemistry, physics and traditional and modern biology including the advanced topics essential to students continuing their studies at the university. Life is explored at the molecular, cellular, organismal and ecological levels.

Associate in Science Degree
The Associate in Science Degree can be obtained by completing the 46-50-unit major, the general education requirements, and electives for a total of 65-66 units. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Biology Associate Degree will be able to:
1. Design and/or interpret an investigation, including data collection and/or analysis.
2. Describe the molecular basis of genetics and energetics.
3. Explain the principles and mechanisms of microevolution and macroevolution.

REQUIRED COURSES . . . . **Units**
BIO 002 Principles of Cell and Molecular Biology 5
BIO 003 Evolution, Ecology & Biodiversity 5
CHEM 001 General Chemistry 5
AND
CHEM 002 General Chemistry 5
CHEM 003 Organic Chemistry I 5
AND
CHEM 004 Organic Chemistry II 5
MATH 030 Analytic Geometry and Calculus. 3
AND
MATH 031 Analytic Geometry and Calculus. 3
OR
MATH 020 Analytic Geometry and Calculus I 5
AND
MATH 021 Analytic Geometry and Calculus II 5

PHYS 002 General Physics (Non-Calculus) 5
AND
PHYS 004 General Physics (Non-Calculus). 5
OR
PHYS 006 Physics for Science and Engineering. 5
AND
PHYS 007 Physics for Science and Engineering. 5
    Total Units . . . . 46 – 50

BIO   002   **5.0 Units**
Principles of Cell and Molecular Biology
Prerequisite: CHEM 001. Course Advisory: Eligibility for English 001. This course introduces biology majors to the basic concepts of cell and molecular biology and to the laboratory techniques used to study cells and biological molecules. Subjects include the structure and function of biological molecules, prokaryotic and eukaryotic cell structure and function, cell physiology and metabolism, Mendelian and molecular genetics, and the techniques used in biotechnology to manipulate DNA. *Three hours lecture, six hours lab.*

BIO   003   **5.0 Units**
Evolution, Ecology & Biodiversity
Prerequisite: MATH 104, BIO 002. Course Advisory: Eligibility for English 001. This course for biology majors covers evolution, ecology, and the diversity of life. The laboratory component includes invertebrate and vertebrate dissection and several weekend and all day field trips. Students must successfully complete both the lecture and the laboratory portions of the course. Fiel trips may be required. Some field trips may involve a fee. Formerly BIO 001. *Three hours lecture, six hours lab.*

Biology

BIO   004   5.0 Units
Human Anatomy
Course Advisory: Eligibility for English 001 and SCC minimum Math standard, BIO 016 is strongly recommended. BIO 004 is a study of the structural organization of the human body, from cellular to organismal level. Throughout the course, various types of instruction are used, including microscopic investigation of prepared slides of tissues and organs, gross (macroscopic) anatomical dissection, and examination of prosected human material. Formerly BIO 006. C-ID BIOL 110B. *Three hours lecture, six hours lab.*

BIO   005   5.0 Units
Human Physiology
Prerequisite: A minimum grade of C in BIO 004 and CHEM 001 or CHEM 010 or CHEM 051. Course Advisory: SCC minimum English and Math standards. This course describes physiological and homeostatic mechanisms of the body systems in health and disease. The laboratory relates structure to function, uses instrumentation to measure physiological variables, and enables students to critically evaluate functional status. *Three hours lecture, six hours lab.*

BIO   012   3.0 Units
Environmental Science
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. This course examines the basic concepts of biology (especially ecology), chemistry, and physics to study: (1) human population growth, (2) short and long-term use of resources (such as soil, food, land, renewable and nonrenewable energy, water, and air), and (3) the production of pollution and other wastes. Field trips may be required. *Three hours lecture.*

BIO   012L   1.5 Units
Environmental Science Laboratory
Prerequisite: BIO 012 (may be taken concurrently) Course Advisory: Eligibility for English 001 and SCC minimum Math standard. A course that uses laboratory and mandatory field trip techniques to examine the ecological roles of organisms, resource use, and pollution/waste. Field trips may be required. *Three hours lab.*

BIO   014   4.0 Units
Principles of Microbiology
Prerequisite: Minimum grade of C in CHEM 051, CHEM 010, or CHEM 001 and a minimum grade of C in MATH 104 or MATH 114 or two years of high school alegbra. Course Advisory: SCC minimum English and Math standards. The study of the morphology, physiology, genetics, taxonomy, and ecology of microorganisms. The course also includes principles of immunology, the control of microbes, and their relationship to disease. Laboratory exercises cover microscopy, staining, aseptic techniques, identification, and microbial growth among others. *Three hours lecture, three hours lab.*

BIO   015   4.0 Units
Introduction to Biology
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. A non-majors biology course that introduces basic concepts of living organisms including aspects of biological chemistry, cell structure and function, physiology, genetics, evolution, and ecology. Students must successfully complete both the lecture AND lab portions of the course. Off-campus field trips may be required and may involve a fee. NOTE: Not open for credit to students who have completed BIO 001, 002 or 012. *Three hours lecture, three hours lab.*

BIO   016   3.0 Units
Introduction to Human Biology
Course Advisory: SCC minimum English and Math standards. An introduction to general biology with emphasis on the human model. Topics include cell structure and function, human evolution, anatomy and physiology, genetics, and the human impact on the environment. This is a course for non-majors. NOTE: Not open for credit to students who have completed BIO 001, 002, 005, 010 or 015. *Three hours lecture.*

BIO   016L   1.5 Units
Human Biology Laboratory
Prerequisite: BIO 016 with a minimum grade of C (may be taken concurrently). Course Advisory: Eligibility for English 001 and SCC minimum Math standard. A non-majors laboratory course providing an introduction to general biology with an emphasis on the human model. Topics include microscopy, cell structure and function, human anatomy and physiology, genetics and the human impact on the environment. *One half-hour lecture, three hours lab.*

Biology

BIO 018   **3.0 Units**
Biology Of Sex
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. The biological bases of human sex and sexuality will be discussed. Emphasis will be placed on the normal and diseased state of the male and female reproductive system. Essay and objective exams as well as written assignments will be used for student evaluations; the final exam will be comprehensive. *Three hours lecture.*

BIO 019   **4.0 Units**
Marine Biology
Course Advisory: Eligibility for ENGL 001 and SCC minimum Math standard. A non-majors course that studies the diversity and natural history of life in the marine environment with an emphasis on the adaptations of organisms to their environment. Students must successfully complete both the lecture and laboratory portions of the course. Field trips may be required. Some field trips may involve a fee. This course is not open for credit to students who have completed BIO 001 or 002 . *Three hours lecture, three hours lab.*

BIO 047   **0.5 to 3.0 Units**
Independent Study
Prerequisite: Minimum grade of C in 12 units of credit, including 4 units from within the discipline. Course Advisory: Eligibility for English 001; statistics may be useful for data analysis. Designed for students who intend to major in biological sciences or pre-professional programs. Students may take this course up to the maximum number of units over multiple semesters. *One and one-half to nine hours by arrangement.*

BIO 048
Special Topics in Biology
These courses, numbered 048, 098, or 148 depending upon their transferability, are courses of contemporary interest centered on changing knowledge and important issues in the field. Announcements of Special Topics courses appear in the Schedule of Classes.

BIO 049   **1.0 to 3.0 Units**
Biology Honors
Prerequisite: Eligibility for Honors Program; BIO 001, BIO 002, BIO 005, BIO 014, or BIO 015 (any of these courses may be taken concurrently). Requires approval of a faculty member sponsor and the Dean of the School of Science and Mathematics. Course Advisory: Eligibility for English 001. Requires students to complete an independent student project under the supervision of a member of the faculty. The project may be a laboratory or field study or a library study that leads to a thesis. In all cases, the final written product should show integration and synthesis of ideas. Students may take this course up to the maximum number of units over multiple semesters. *Three to nine hours by arrangement.*

BIO 099   **0.5 to 2.0 Units**
Biology Honors: Special Dissection
Prerequisites: Completion of 24 units of college credit with a minimum GPA of 3.3; a minimum of 5 units in BIO 004 with a minimum grade of B; an ability to work independently; permission of the School Dean based on instructor availability. An independent study project designed to increase understanding of human anatomy through detailed dissection and other projects assigned by the supervising instructor. The student will be evaluated through oral examination and evaluation of dissections. This course is an Open Entry/Open Exit course. Students may continue BIO 099 over multiple semesters not to exceed 2 units. *One and one-half to six hours by arrangement.*

BIO 160   **2.5 Units**
Review of Scientific Principles of Pre-Nursing
Prerequisite: CONDITION OF ENROLLMENT: Current acceptance or on the waiting list of an RN Program. This course focuses on science and mathematics topics that are critical to success for students entering an RN program. It provides a clinically pertinent review of select anatomy, physiology, nutrition,and microbiology topics for students entering nursing school. It is especially designed for students that have had an extended time period between finishing their pre-nursing requirements and entering nursing school. This course is taught by a panel of experts in the field. Case studies are extensively used in order to contextualize the material. *This is a Pass/No Pass only course. Ten hours lecture. (4-week course).*

Biotechnology

Industrial Biotechnology

Program Description
This program prepares graduates to work in the biotechnology industry as production technicians. A production technician operates and maintains the equipment used to manufacture protein pharmaceutical products. Students will grow bacterial, yeast, and mammalian cells and recover the proteins that they produce. They will follow good manufacturing practices by maintaining records in order to comply with quality assurance procedures and government regulations. Students in the program must be able to adjust their time to a flexible schedule.

Certificate of Achievement and Associate in Science Degree
The Certificate of Achievement can be obtained upon completion of the 22-24-unit major with a grade of C (2.0) or better in each course. The Associate in Science Degree can be obtained upon completion of 60 units, including the major, general education requirements and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Industrial Biotechnology Certificate of Achievement/Associate Degree will be able to:
1. Understand the structure and function of protein pharmaceuticals and evaluate which protein properties a production facility can exploit to purify a particular protein from other cellular components.
2. Construct a pathway analyzing how a drug or biologic is produced by genetically engineered cells and subsequently purified.

REQUIRED COURSES . . . . **Units**
BIOT 051 Principles of Biotechnology 3
BIOT 052 Business and Regulatory
        Practices in Biotechnology 3
BIOT 062 Cell Culture and Protein Recovery 4
BIOT 063 Biotechnology Instrumentation:
        Quality Control & Genetic Engineering 4
BIO 014 Principles of Microbiology 4
OR
BIO 002 Principles of Cell and Molecular Biology 5
CHEM 010 Intermediate Chemistry 4
OR
CHEM 001 General Chemistry 5
   Total Units . . . . **22 – 24**

NOTE: Prior knowledge and use of computers is advised, including word processing, spreadsheets, and databases.

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Industrial Biotechnology."

Biotechnology

Applied Biotechnology

Certificate of Achievement
A Certificate of Achievement can be obtained by completion of the 18-unit major with a grade of C or better or a P if the course is taken on a Pass/No Pass basis in each course.

Program Outcomes
Students who complete the Applied Biotechnology Certificate of Achievement will be able to:
1. Understand the structure and function of protein pharmaceuticals and evaluate which protein properties a production facility can exploit to purify a particular protein from other cellular components.
2. Construct a pathway analyzing how a drug or biologic is produced by genetically engineered cells and subsequently purified.

REQUIRED COURSES . . . . **Units**
BIOT 051 Principles of Biotechnology 3
BIOT 052 Business and Regulatory
        Practices in Biotechnology 3
BIOT 062 Cell Culture and Protein Recovery 4
BIOT 063 Biotechnology Instrumentation:
        Quality Control & Genetic Engineering 4
BIOT 160 Basic Concepts/Methods in Biotechnology . . . 4
    Total Units **18**

Note: Prior knowledge and use of computers is advised, including word processing, spreadsheets, and databases.

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Applied Biotechnology."

BIOT   051   3.0 Units
Principles of Biotechnology
Prerequisite: BIO 014 or BIO 002 or BIOT 160. Course Advisory: Eligibility for English 001 and SCC minimum Math standard. This course covers topics important in the development, production, recovery, and analysis of products produced by biotechnology. The course traces the path of a drug or biologic from the cell through the production facility, the final processing, and into the human body. It discusses the growth characteristics of the organisms used to produce pharmaceutical proteins, the techniques used in product recovery, and the techniques used in product analysis. *Three hours lecture.*

BIOT   052   3.0 Units
Business and Regulatory Practices
In Biotechnology
Course Advisory: Eligibility for ENGL 001 and SCC minimum Math standard. Examines how basic business principles and sound manufacturing procedures assure the quality and safety of a product as the manufacturing team moves a product down the biotechnology production pipeline. It explores the role of governmental oversight and regulation during the discovery, development, and manufacturing of new products produced by biotechnology. *Three hours lecture.*

Biotechnology

BIOT 062   **4.0 Units**
Cell Culture And Protein Recovery
Prerequisite: BIO 014 or BIO 002 or BIOT 160. Course Advisory: Eligibility for English 001. This laboratory course teaches the skills needed to serve as a technician in biotechnology production. Students grow and monitor bacterial, yeast, and mammalian cells on a laboratory scale that emulates the large-scale production used in industry. Students will become familiar with the cleaning, sterilization, aseptic inoculation, operation, and monitoring of fermenters and bioreactors. Students then recover and purify proteins produced by those cell cultures. They recover and purify proteins using centrifugation, ultrafiltration, and chromatography techniques. The course emphasizes the use of current Good Manufacturing Practices (cGMP), and students gain experience following Standard Operating Procedures (SOP). *Two hours lecture, six hours lab.*

BIOT 063   **4.0 Units**
Biotechnology Instrumentation:
Quality Control & Genetic Engineering
Prerequisite: BIO 014 or BIO 002 or BIOT 160. Course Advisory: Eligibility for English 001. Familiarizes students with small scale laboratory practices, both those used in a research laboratory and those used by a quality control department in industry, to analyze the quality of a cell culture process and the purity of protein products produced by cells in culture. The course emphasizes the use of Good Laboratory Practices (GLP) in these analyses. Students will gain experience in techniques used to analyze nucleic acids and in the genetic engineering of cells. They will also gain experience with the common assays used in Quality Control including electrophoresis, High Performance Liquid Chromatography (HPLC), Enzyme Linked Immunosorbant Assay (ELISA), and Polymerase Chain Reaction (PCR) to test products generated using cell culture. *Two hours lecture, six hours lab.*

BIOT 160   **4.0 Units**
Basic Concepts/Methods in Biotechnology
Course Advisory: MATH 330; SCC minimum English standard with a minimum grade of C. This course is not designed for students intending to transfer. This course serves as a prerequisite to Solano College's biotechnology courses by giving students knowledge of the basic concepts in biology and chemistry used in biotechnology while also developing the basic laboratory skills required to succeed in the field. *Two hours lecture, six hours lab.*

Business

Associate in Science in Business Administration for Transfer (ADT: A.S.-T)

Program Description
This curriculum is designed to provide an opportunity for Business majors to achieve an associate in science degree in business administration while completing the requirements for transfer to a California State University (CSU) or other four-year college or university. A baccalaureate degree is recommended preparation for those considering careers in business. Completion of this curriculum will demonstrate commitment to the field and provide comprehensive preparation for upper-division work.

Associate in Science in Business Administration for Transfer
A Solano College student who has earned the associate in science degree in business administration for transfer will be granted priority admission to the CSU into a similar (BA) degree program as long as the student meets all prescribed admission requirements. Once admitted the student will only be required to complete 60 additional upper-division units to qualify for the similar BA degree. The A.S.-T degree does not guarantee admission to a specified major or campus, but does require the California State University to grant a student priority admission consideration to a CSU campus and to a major that is similar to the transfer degree.

To earn the Associate in Arts in Business for Transfer degree, students must:
1. Complete 60 semester units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements
   b. A minimum of 18 semester units in a major or area of emphasis, as determined by the community college district.
2. Obtain a minimum grade point average of 2.0.

Program Outcomes
Students who complete the Associate in Science in Business Administration for Transfer degree will be able to:
1. Recognize and describe the importance of marketing, law, economics, accounting, business administration, finance, risk analysis, and personnel management in business and formulate hypotheses based on these concepts.
2. Analyze practical business problems and utilize research and critical thinking to evaluate and recommend alternative solutions.
3. Use appropriate computer software to create and or modify relevant business documents.
4. Apply accounting concepts and principles in making business decisions.

REQUIRED COURSES . . . . **Units**
ACCT 001 Principles of Accounting – Financial 4
ACCT 002 Principles of Accounting – Managerial 4
BUS 005 Introduction to Business 3
BUS 018 Legal Environment of Business 3
CIS 050 Microcomputer Applications 3
ECON 001 Principles of Economics (Macroeconomics) . . 3
ECON 002 Principles of Economics (Microeconomics) . . 3
MATH 011 Elementary Statistics 4
   Required Major Total Units **27**

CSU General Education
   or IGETC Pattern Units . . . . **37 – 39**
CSU Transferable Electives
   (as needed to reach 60 transferable units)* . . . . **3 – 5**
    Total Degree Units **60**

* 9 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.

Business

Business, General (Transfer)

Program Description
This program is designed for business students planning to transfer to the University of California and/or the California State University systems.

Certificate of Achievement
A Certificate of Achievement can be obtained by completing the 26-unit major with a grade of "C" or better in each course or a P if taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Business, General Certificate of Achievement will be able to:

1. Recognize the importance marketing, legal, economics, accounting, business forms, financing, risk, and personnel management is in business and formulate hypotheses based on these concepts.

REQUIRED COURSES . . . . Units
ACCT 001 Principles of Accounting - Financial. 4
ACCT 002 Principles of Accounting - Managerial. 4
BUS 005 Introduction to Business 3
BUS 018 Legal Environment of Business 3
CIS 001 Introduction to Computer Science. 3
OR
CIS 050 Microcomputer Applications 3
ECON 001 Principles of Economics (Macroeconomics) . . 3
ECON 002 Principles of Economics (Microeconomics) . . 3
Elective(s) selected from the recommended electives. . . . 3
    Total Units 26

Recommended Electives
(Select three units). . . . . Units
BUS 092 Business Communication 3
CIS 020 Assembly Programming 3
CIS 022 Introduction to Programming 3
CIS 023 Data Structures and Algorithms 4
MATH 011 Elementary Statistics 4
MATH 020 Analytic Geometry and Calculus I 5
MATH 021 Analytic Geometry and Calculus II. 5
MATH 030 Analytic Geometry and Calculus. 3
MATH 031 Analytic Geometry and Calculus 3
OCED 090 Occupational Work Experience 1-8
OCED 091 General Work Experience. 1-6

*Suggested general education math courses for the Business, General (Transfer) major are MATH 011 (Statistics) OR MATH 030 (Analytical Geometry and Calculus). Students should consult a counselor regarding Business Articulation Agreements.

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Business, General: Transfer."

Business

Business-Insurance: Property & Casualty

Program Description
This program provides essential background information needed by those wishing to work in an insurance office. Extensive employment opportunities are available in a variety of job areas from sales to accounting to database or project management.

Certificate of Achievement and Associate in Science Degree
A Certificate of Achievement can be obtained by completing the 31-unit major below. The Associate in Science Degree can be obtained upon completion of 60 units, including the major, and the general education requirements and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Business-Insurance: Property & Casualty Certificate of Achievement/Associate Degree will be able to:
1. Understand the insurance process, the segments of insurance, and the consequences of insurance contracts in mitigating loss.
2. Understand the risk management techniques available to handle exposure to loss and the use of risk modification.
3. Understand the financial and human consequences of loss. Proper and casualty exposures.
4. Apply the insurance principles in potential and real business and personal loss exposures.
5. Understand the exposures to loss faced by an individual and/or corporation.

REQUIRED COURSES . . . . **Units**
ACCT 001 Principles of Accounting - Financial. 4
BUS 005 Introduction to Business 3
BUS 018 Legal Environment of Business 3
BUS 070 Introduction to Insurance 1
BUS 071 Principles of Property and Liability Insurance. . 3
BUS 072 Personal Insurance 3
BUS 073 Commercial Insurance 3
BUS 074 Insurance—Code & Ethics. 1
BUS 092 Business Communication 3
CIS 050 Microcomputer Applications 3
CIS 073 Microsoft Excel 3
OCED 090 Occupational Work Experience. 1
   Total Units **31**

Recommended Electives
MKT 171 Introduction to Marketing
MKT 173 Principles of Selling

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Business Insurance: Property & Casualty."

Insurance Specialist Job-Direct Certificate
All courses must be completed with a C or better

REQUIRED COURSES . . . . **Units**
BUS 070 Introduction to Insurance 1
BUS 071 Principles of Property and Liability Insurance. . 3
BUS 072 Personal Insurance 3
BUS 073 Commercial Insurance 3
BUS 074 Insurance—Code & Ethics. 1
   Total Units **11**

Business

Many courses formerly listed under the Business discipline appear under the disciplines "Accounting," "Management," "Marketing," or "Office Technology."

BUS   005   3.0 Units
Introduction To Business
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. A comprehensive study and analysis of the principles of business. The course introduces students to contemporary business principles, practices, and terminology. Students will gain an understanding and appreciation of the private enterprise system, and how the functional areas of business work and interrelate. The course explores business career opportunities, provides the prerequisite knowledge needed for success in other business courses, and prepares students for transfer to upper-division business degree programs. Assigned readings, class participation, written homework, and written examinations are required. *Three hours lecture.*

BUS   018   3.0 Units
Legal Environment Of Business
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. A comprehensive introduction to the study of law, with specific emphasis on the legal environment of business. Includes the legal process, legal institutions, ethics, jurisdiction, U.S. Constitution, contracts, agency, the Uniform Commercial Code (UCC), torts, employment law, property, bankruptcy law, forms of business organization, corporations, consumer protection, government regulation and Alternative Dispute Resolution (ADR), along with ethical concerns and current public policy issues. Written examinations required. C-ID BUS 120. *Three hours lecture.*

BUS   060   3.0 Units
Introduction To International Business
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. A comprehensive overview designed to provide a global perspective in a continuously emerging international marketplace, including topics such as foreign investing, impact of financial markets, international marketing, cultural understanding, and operation of multinational and small companies. *Three hours lecture.*

BUS   070   1.0 Unit
Introduction To Insurance
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. Provides students with the background needed prior to taking the other insurance courses. Included are topics such as property / casualty insurance, distribution of insurance products and services to the consumer, how insurance company departments function, civil laws or tort and contract, basic commercial and personal Insurance Services Office (ISO) contracts, and the risk management process. *Three hours lecture (6-week course).*

BUS   071   3.0 Units
Principles Of Property And Liability Insurance
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. One of five insurance courses that are designed to prepare students for employment in the insurance industry, which consists of many different types of employment opportunities, from selling insurance to working in a variety of positions in an insurance company. *Three hours lecture.*

BUS   072   3.0 Units
Personal Insurance
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. Assists individuals in learning basic information regarding personal insurance. It includes information about automobile insurance; homeowners' insurance; other residential insurance, such as fire and earthquake insurance; marine insurance; and other personal property. *Three hours lecture.*

BUS   073   3.0 Units
Commercial Insurance
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. One of five insurance courses designed to prepare students for employment in the insurance industry. Emphasis for this course is on commercial insurance. The insurance industry offers many different types of employment opportunities, from selling insurance to working in an insurance office. *Three hours lecture.*

Business

BUS   074   **1.0 Unit**
Insurance-Code & Ethics
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. Designed to enable students to understand and apply proper ethical business behavior and obligations, especially as they relate to those working in the field of insurance. *Three hours lecture (6-week course).*

BUS   092   **3.0 Units**
Business Communication
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. A study of communication theory in the planning and preparation of various types of letters, reports, resumes, and oral presentations along with analysis of group dynamics, symbolic communication, interview techniques and listening skills. Stresses audience analysis, style, appearance, and the importance of grammar, punctuation and vocabulary. Strong focus on gender and cultural communication issues and strategies in the workplace. Critical thinking encouraged through written and oral assignments and case studies on business communication and ethical issues. *Three hours lecture.*

BUS   099   **1.0 - 3.0 Units**
Business Honors
Prerequisite: Completion of 24 units of college credit with a minimum GPA of 3.3; a minimum of 5 units in the discipline with a minimum grade of B; an ability to work independently; permission of the School Dean based on instructor availability. A comprehensive study and analysis of a topic of student scholarship which is centered on important topics or issues within the business field. Students may take this course up to the maximum number of units over multiple semesters. *Three to nine hours by arrangement.*

BUS   100   **1.5 Units**
Work Readiness
Course Advisory: SCC minimum English and Math standards. Covers the process of assessing the job market and completing a resume and application. Topics include how to be successful on the job and to gain satisfaction and rewards from work. The skills needed in the workplace are emphasized along with the social and communication skills, personal characteristics and habits, and expectations of the employer. *Three hours lecture (8-week course).*

BUS   148A   **3.0 Units**
Small Business Project-Based Path
for Entrepreneurs
Course Advisory: SCC minimum English and Math standards. This course emphasizes activities and techniques through project management that develops competencies needed to become a successful leader. Students receive instruction and project-based activities in the areas of entrepreneurship, project management, personal and workplace skill, oral and written techniques, and networking. *Three hours lecture.*

BUS   181   **1.0 to 3.0 Units**
Business Mathematics
Course Advisory: SCC minimum English standard. This course requires students to apply essential mathematical skills necessary for success in business. Includes a review of fractions, decimals, percents, ratios, the percentage formula, and general business applications; covers advanced business applications such as interest, discount, markup, payroll, pricing policies, cash and trade discounts, and financial statements. This is a self-paced, programmed learning class. Students may take this course up to the maximum number of units over multiple semesters. This is an Open Entry/Open Exit, Variable unit course; Online course is not Open Entry/Open Exit. *One to three hour(s) lecture.*

BUS   182   **1.0 Unit**
Small Business Mathematics
Course Advisory: SCC minimum English and Math standards. This course requires students to apply essential mathematical skills necessary for persons operating a successful business. It includes asset and inventory management; ratio analysis, depreciation, taxation applied to sales, excise, and real property; investments and insurance, and basic statistics. This is a self-paced, programmed learning class. This is an Open Entry/Open Exit course; Online course is not Open Entry/Open Exit. *One hour lecture.*

BUS   208   **0.5 Unit**
Employee Relations And Personnel Policies
Good employees are made through effective training, development, and relations. This course explores techniques used in training and developing good employees. The elements that comprise a sound employee relations program are presented. *This is a Pass/No Pass only course. Eight hours lecture (2-week course).*

Chemistry

Chemistry

Program Description

This program is designed to foster an understanding of the fundamental principles of chemistry in a variety of applications. Students will learn how chemical knowledge is derived, theorized, and applied in solving problems in everyday life.

Associate in Science Degree

The Associate in Science Degree can be obtained by completing 60 units, including the 26-30-unit major listed below, general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes

Students who complete the Chemistry Associate Degree will be able to:
1. Interpret and analyze chemical data.
2. Apply chemical bonding knowledge to structural analysis.
3. Construct balanced equations for chemical reactions.
4. Develop various lab techniques.
5. Formulate and write names for chemical compounds.
6. Analyze chemical problems.

REQUIRED COURSES . . . . **Units**

CHEM 001 General Chemistry 5
AND
CHEM 002 General Chemistry 5
CHEM 003 Organic Chemistry I 5
AND
CHEM 004 Organic Chemistry II 5
BIO (any course except 048 or 098). . . . . 3 - 5
PHYS 002 General Physics (Non-calculus). 5
OR
PHYS 006 Physics for Science and Engineering. 5
OR
PHYS 010 Descriptive Physics 3
    Total Units . . . . 26 – 30

CHEM 001   5.0 Units
General Chemistry

Prerequisite: A minimum grade of C in any of the following: MATH 104 or two years of high school algebra AND a minimum grade of C in one of the following: CHEM 160 OR one year of high school chemistry. Course Advisory: Eligibility for English 001 and CHEM 010 is strongly recommended for students who need additional preparation in problem solving. Presents principles of general chemistry for students in science, engineering, medical and related professions. Topics include atomic structure and theory, the periodic table, bonding, gas laws, stoichiometry, solutions, ionization, thermochemistry and equilibrium. Field trips may be required. Some online work may be required. *Three hours lecture, six hours lab.*

CHEM 002   5.0 Units
General Chemistry

Prerequisite: CHEM 001 with a minimum grade of C. Course Advisory: Eligibility for English 001. A continuation of chemical principles and theory covered in CHEM 001 with emphasis on electrochemistry, chemical equilibrium, and quantitative and qualitative analysis. Field trips may be required. Online work may be required. *Three hours lecture, six hours lab.*

Chemistry

CHEM 003   **5.0 Units**
Organic Chemistry I
Prerequisite: CHEM 002 with a minimum grade of C. Course Advisory: English 001 is strongly recommended. First half of a two semester course (CHEM 003 and CHEM 004) that begins a survey of organic chemistry for students in chemical, biological, health science, and related professions. Topics include analysis of structure and nomenclature, bonding, isomerism, and basic reaction mechanisms of organic chemicals. Functional groups considered include alkanes, alkenes, alkynes, alcohols, and alkyl halides. Basic organic laboratory procedures are introduced along with spectral analysis, simple syntheses, and reactions described in lecture. Field trip may be required. Online homework may be required. *Four hours lecture, four hours lab.*

CHEM 004   **5.0 Units**
Organic Chemistry II
Prerequisite: CHEM 003 with a minimum grade of C. Course Advisory: Eligibility for English 001. A continuation of CHEM 003, topics include analysis of structure, nomenclature, and reaction mechanisms of conjugated systems, aromatics, organometallics, various functional groups, carbohydrates, lipids, amino acids, proteins, and nucleic acids. The laboratory will emphasize more advanced work and the application of instrumentation in organic chemistry. Field trip may be required. Online homework may be required. *Four hours lecture, four hours lab.*

CHEM 010   **4.0 Units**
Intermediate Chemistry
Prerequisite: CHEM 160 with a minimum grade of C, or two semesters of high school chemistry, and a minimum grade of C in MATH 104 or MATH 114 or two years of high school algebra. Course Advisory: Eligibility for English 001. A general chemistry course often required for nursing students and for students majoring in physical therapy, occupational therapy, industrial technology and home economics, it emphasizes the chemistry of inorganic compounds and covers selected topics such as atomic theory, bonding, equations, gas laws, solutions, acid-base theory, and oxidation-reduction. Field trip may be required. Online homework may be required. NOTE: Not open for credit to students who have completed CHEM 001. *Three hours lecture, three hours lab.*

CHEM 011   **4.0 Units**
Basic Organic Chemistry & Biochemistry
Prerequisite: CHEM 010 or CHEM 001 with a minimum grade of C. Course Advisory: Eligibility for English 001. Presents an overview of organic chemistry and biochemistry for majors in nursing, home economics, liberal arts and technical fields. Field trip may be required. Online work may be required. *Three hours lecture, three hours lab.*

CHEM 051   **5.0 Units**
Chemistry for the Health Sciences
Prerequisite: CHEM 160 with a minimum grade of C, or two semesters of high school chemistry, and a minimum grade of C in MATH 104 or MATH 114 or the equivalent or two years of high school algebra. Course Advisory: Eligibility for English 001. This course presents an overview of general, organic chemistry, and biochemistry for majors in nursing and other allied health occupations. Topics covered include chemical bonding, chemical equations, gas laws, solutions, acid-base theory, oxidation-reduction, functional groups and properties of organic compounds, and the structure and function of carbohydrates, lipids, proteins, and nucleic acids. These topics are discussed in the context of cellular metabolism and human health. This course is not a prerequiste for any chemistry course. Field trip may be required. Online homework may be required. NOTE: Not open for credit to students who have completed CHEM 011. *Three hours lecture, six hours lab.*

CHEM 098
These courses, numbered 048, 098, or 148 depending upon their transferability, are courses of contemporary interest centered on changing knowledge and important issues in the field. Announcement of Special Topics courses appears in the Schedule of Classes.

CHEM 160   **4.0 Units**
Introductory Chemistry
Prerequisite: A minimum grade of C in any of the following: MATH 104 or MATH 114 or two years of high school algebra. Course Advisory: SCC minimum English standard. An introductory course covering the fundamental principles of inorganic chemistry. Field trips may be required. Online work may be required. NOTE: Not open to students who have completed CHEM 001, CHEM 010, or equivalent. *Three hours lecture, three hours lab.*

Child Development and Family Studies

(Formerly Early Childhood Education and Human Development)

Early Childhood Education

Program Description

This program offers comprehensive study of child development, strategies for child guidance, techniques for effective classroom interaction with emphasis on the child in the context of family and culture, and curriculum that enhances the development of the whole child. The Child Development and Family Studies Department is a participant in the Curriculum Alignment Project (CAP). A key effort of the Curriculum Alignment Project is to facilitate the transfer of the courses below as an integrated course of study promoting access to ongoing education and degree attainment. These courses will ease transfer between many California State Universities. The CAP courses include: CDFS 038, CDFS 050, CDFS 053, CDFS 054 (or NUTR 054), CDFS 062, CDFS 063, CDFS 064, and CDFS 065.

Certificate of Achievement and Associate in Science Degree

A Certificate of Achievement can be obtained upon successful completion of the 35-unit major with a grade of C (2.0) or better in each course. The Associate in Science degree can be obtained by completing the 35-unit major, the general education requirements (Solano College, CSU or IGETC), and electives.

Program Outcomes

Students who complete the Early Childhood Education Certificate of Achievement/Associate Degree will be able to:
1. Demonstrate an understanding of child development theory, current research, and trends in the field, and their application to responsive practice in early care setting.
2. Demonstrate an understanding of the context of individual development including the centrality of family, culture, and community. Students will develop specific techniques for creating meaningful relationships between home and school.
3. Develop curriculum and early care environments that are derived from unbiased observation and assessment of children's interests and developmental levels.
4. Demonstrate reflective practice in their work with young children by building awareness of self as teacher, child as learner, and early childhood pedagogy.

REQUIRED COURSES

Full-time students are advised to enroll in CDFS 038, CDFS 050, CDFS 062, and a required curriculum course (CDFS 071, 072, or 073) during their first semester. Second semester students should take CDFS 054, CDFS 063, and CDFS 064. In the third and fourth semesters, students should take practicum (CDFS 065 and CDFS 066), CDFS 053, and a required curriculum course (CDFS 071, 072, 073, or 074). Students will spend their first semester of ECE Practicum I (CDFS 065) assigned to the Solano College Children's Program. A second semester may be spent either on campus or off campus (CDFS 066). Off campus placements will be made with an approved teacher from the Early Childhood Mentor Project. Prior to the first week of enrollment in CDFS 065 or 066, students will be required to pass a criminal record check and be fingerprinted at District expense.

	Units
CDFS 038 Child Growth and Development	3
CDFS 050 Child, Family and Community	3
CDFS 053 Teaching in a Diverse Society	3
CDFS 054 Child Health, Safety, and Nutrition	3
OR	
NUTR 054 Child Health, Safety, and Nutrition	3
CDFS 062 Introduction to Early Childhood Education: Principles and Practices	3
CDFS 063 Introduction to Curriculum	3
CDFS 064 Observation and Assessment	3
CDFS 065 Early Childhood Education Practicum I	4
CDFS 066 Early Childhood Education Practicum II	4
Two courses from the required list	6
Total Units	**35**

Two courses (6 units) from the following list are required:

	Units
CDFS 071 Language and Literature for ECE	3
CDFS 072 Art and Creative Development for ECE	3
CDFS 073 Music and Movement for ECE	3
CDFS 074 Science and Math for ECE	3

Recommended Electives

CDFS 040 Family Relationships
CDFS 052 Children with Special Needs
CDFS 055 Impact of Violence on Children and their Families
CDFS 056 Intervention and Strategies for Working with
        Children with Challenging Behaviors
CDFS 071 Language and Literature for ECE
CDFS 072 Art and Creative Development for ECE
CDFS 073 Music and Movement for ECE
CDFS 074 Science and Math for ECE
CDFS 075 Care of Infants and Toddlers: Social-Emotional
        Foundation
CDFS 076 Care of Infants and Toddlers: Curriculum and
        Environments
CDFS 080 Early Childhood Administration
CDFS 081 Early Childhood Staff Supervision
CDFS 082 Adult Supervision: The Mentor Teacher
NUTR 010 Nutrition
SOC 001 Introduction to Sociology
HS 051 Introduction to Human Services
HS 053 Serving Special Populations

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Early Childhood Education."

Child Development and Family Studies

Associate in Science in Early Childhood Education for Transfer (ADT: A.S.-T)

Program Description
Successful completion of this major prepares students to work in the field of early childhood education. Students will learn about child development, health and safety, observation and assessment, and techniques for effective classroom teaching including child guidance, curriculum development, and educating in a culturally respectful manner. One semester of practicum is required. This program aligns with the statewide Early Childhood Education Curriculum Alignment Project (CAP) which is designed to aid in student transfer. The CAP courses include: CDFS 038, CDFS 050, CDFS 053, CDFS 054 (or NUTR 054), CDFS 062, CDFS 063, CDFS 064, and CDFS 065.

Associate in Science in Early Childhood Education for Transfer
The Associate in Science in Early Childhood Education for Transfer is especially appropriate for students who plan to complete a bachelor's degree in Early Childhood Education or Child Development at a CSU campus. Students completing an Associate in Science in Early Childhood Education for Transfer degree are guaranteed admission to the CSU system, but not to a particular campus or major. Students transferring to a CSU campus that does accept the Associate in Science in Early Childhood Education for Transfer will be required to complete no more than 60 units after transfer to earn a bachelor's degree. This degree also prepares students for Early Childhood Education degree programs at other four-year institutions, but does not come with the same guarantees. In all cases, students should consult with a counselor for more information on university admission and transfer requirements.

To earn the Associate in Science in Early Childhood Education for Transfer Degree, students must:
1. Complete 60 semester units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements
   b. A minimum of 18 semester units in a major or area of emphasis, as determined by the community college district.
2. Obtain a minimum grade point average of 2.0.

Program Outcomes
Students who complete the Associate in Science in Early Childhood Education for Transfer degree will be able to:
1. Demonstrate an understanding of child development theory, current research, and trends in the field, and their application to responsive practice in early care settings.
2. Demonstrate an understanding of the context of individual development including the centrality of family, culture, and community through developing techniques for creating meaningful relationships between home and school.
3. Develop curriculum and early care environments that are derived from unbiased observation and assessment of children's interests and developmental levels.
4. Demonstrate reflective practice in their work with young children by building awareness of self as teacher, child as learner, and early childhood pedagogy.

REQUIRED COURSES
The following 25 CDFS units are required for the Early Childhood Education for transfer degree. Some may double count for general education and the major (CDFS 038, CDFS 050). It is recommended that full time students enroll in CDFS 038, CDFS 050, and CDFS 062 in their first semester. Second semester students should take CDFS 054, CDFS 063, and CDFS 064. In the second year students should take CDFS 065, CDFS 053, and complete their other general education requirements. Practicum placements (CDFS 065) will be made at the Solano College Children's Program. Prior to the first week of enrollment in practicum student will be required to pass a criminal record check and be fingerprinted at the District's expense.

Units

CDFS 038 Child Growth and Development	3
CDFS 050 Child, Family and Community	3
CDFS 053 Teaching in a Diverse Society	3
CDFS 054 Child Health, Safety, and Nutrition	3
CDFS 062 Introduction to Early Childhood Education: Principles and Practices	3
CDFS 063 Introduction to Curriculum	3
CDFS 064 Observation and Assessment	3
CDFS 065 Early Childhood Education Practicum I	4

Required Major Total Units. 25
CSU General Education or IGETC Pattern Units . 37 - 39
CSU Transferable Electives
   (as needed to reach 60 transferable units)* . . . . . . 2 - 5
Total Degree Units. 60

* 6 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.

Child Development and Family Studies

CDFS   038   3.0 Units
Child Growth and Development
Course Advisory: Eligibility for English 001. This course examines the major physical, cognitive, and psychosocial developmental milestones (typical and atypical) and theories from conception through adolescence. Emphasis is placed on the interaction bewtween maturational processes and environmental factors. Current research and methodologies are examined. Child observations and analysis are included. Field trip may be required. Field trip may be required. Formerly HUDV 038. C-ID CDEV 100. *Three hours lecture.*

CDFS   040   3.0 Units
Family Relationships
Course Advisory: Eligibility for English 001. A study of sociological and psychological factors influencing relationships, particularly dating, family, and marital relationships, as well as alternative lifestyles in contemporary society, including factors that affect communication and interpersonal interactions within relationships. Formerly HUDV 040. *Three hours lecture.*

CDFS   050   3.0 Units
Child, Family, Community
Course Advisory: Eligibility for English 001. An examination of the devloping child in a societal context focusing on the interrelationships of family, school and community, including historical and socio-cultural influences. Socialization and identity development are emphasized, as are teacher startegies for building respectful, reciprocal relationships that support and empower children and families. Formerly HUDV 050. C-ID CDEV 110. Three hours lecture.

CDFS   052   3.0 Units
Children with Special Needs
Prerequisite: CDFS 038. Course Advisory: Eligibility for English 001. An introductory study of children with special needs, including causes of disabilities, their incidence, care, management, and general remedial procedures. Emphasis is on the child with disabilities in the home and community settings. Formerly HUDV 075. *Three hours lecture.*

CDFS   053   3.0 Units
Teaching in a Diverse Society
Course Advisory: Eligibility for English 001. Examination of teaching young children in a diverse society in an effort to support optimal identity development, competency, and inclusion. Theoretical and practical implications of oppression and privilege will be explored as they apply to children, families, programs, classrooms, and teaching. Various classroom strategies will emphasize culturally and linguistically appropriate anti-bias approaches. Course includes self-examination and reflection on issues related to social identity, stereotypes and bias, social and educational access, media, and schooling. Formerly HUDV 053. C-ID ECE 230. *Three hours lecture.*

CDFS   054   3.0 Units
Child Health, Safety, and Nutrition
Course Advisory: Eligibility for English 001, CDFS 038 and CDFS 062. Introduction to the laws, regulations, standards, policies and procedures and early childhood curriculum related to child health safety and nutrition. The key components that ensure physical health, mental health and safety for both children and staff will be identified along with the importance of collaboration with families and health professionals. Focus on integrating the concepts into everyday planning and program development for all children. This course is the same course as NUTR 054. C-ID ECE 220. *Three hours lecture.*

CDFS   055   3.0 Units
Impact of Violence on Children and their Families
Course Advisory: SCC minimum English standards. Exploration of violence in America and its impact on the physical and psychological well-being of children, their families and early childhood teachers. Emphasis on critical factors in understanding appropriate early childhood violence prevention and intervention strategies. Formerly ECE 050. *Three hours lecture.*

CDFS   056   3.0 Units
Intervention and Strategies for Working with Children with Challenging Behaviors
Course Advisory: SCC minimum English standards. Provides early childhood teachers knowledge and skills to respond to the needs of children and families who experience stress and chronic violence through exploration of the power of play in helping children resolve conflicts and methods for teaching alternative to violence. Formerly ECE 051. *Three hours lecture.*

Child Development and Family Studies

CDFS   062   **3.0 Units**
Introduction to Early Childhood Education:
Principles and Practices
Prerequisite: CDFS 038 (may be taken concurrently).
Course Advisory: Eligibility for English 001. An
examination of the underlying theoretical principles of
developmentally appropiate practices applied to
programs, environments, emphasizing the key role of
relationships, constructive adult-child interactions,
and teaching strategies in supporting physical, social,
creative and intellectual development for all young
children. This course includes a review of the
historical roots of early childhood programs and the
evolution of the professional practices promoting
advocacy, ethics and professional indentity. Formerly
ECE 062. C-ID ECE 120. *Three hours lecture.*

CDFS   063   **3.0 Units**
Introduction to Curriculum
Prerequisite: CDFS 038 with a minimum grade of C.
Course Advisory: CDFS 062 with a minimum grade of C;
eligibility for English 001. This course presents an
overview of knowledge and skills related to providing
appropriate curriculum and environments for young
children from birth to age 6. Students will examine a
teacher's role in supporting development and
fostering children's curiosity and learning. Through
observation and assessment strategies students will
develop appropriate play-based curriculum. An
overview of content areas will include but not be
limited to: Language and literacy, social and emotional
learning, sensory learning, art and creativity, music,
math, and science. Formerly ECE 063. C-ID ECE 130.
Three hours lecture.

CDFS   064   **3.0 Units**
Observation and Assessment
Course Advisory: CDFS 038; Eligibility for ENGL 001.
This course focuses on the appropriate use of
assessment and observation strategies to document
development, growth, play and learning to join with
families and professionals in promoting children's
success. Recording strategies, rating systems,
portfolios, and multiple assessment tools are explored.
Formerly ECE 064. C-ID ECE 200. *Three hours lecture.*

CDFS   065   **4.0 Units**
Early Childhood Education Practicum I
Prerequisite: Minimum grade of C in CDFS 050 and CDFS
063 Course Advisory: Eligibility for ENGL 001.
Supervised laboratory experience with infants through
preschool children in the Solano College Children's
Programs. Students will spend 8 hours in practicum, 1
hour in a teacher meeting, and 1 hour in seminar for a
total of 10 hours per week. Students will utilize
practical classroom experiences to make connections
between theory and practice, develop professional
behaviors, and build a comprehensive understanding
of children and families. Child centered, play-oriented
approaches to teaching, learning, and assessment; and
knowledge of curriculum content areas will be
emphasized as students teachers design, implement
and evaluate experiences that promote positive
development and learning for all young children.
During the first week of enrollment, students will be
required to be fingerprinted and cleared through
Department of Justice and have a negative TB skin test
at the District's expense. Formerly ECE 065. C-ID ECE
210. *One hour lecture, nine hours by arrangement.*

CDFS   066   **4.0 Units**
Early Childhood Education Practicum II
Prerequisite: CDFS 065 with a minimum grade of C.
Course Advisory: Eligibility for English 001. Laboratory
practicum emphasizing curriculum activities,
comphrehensive case studies, methods of child
observation, and relationships of theories to practices.
Students may be placed in the Solano College
Children's Programs on campus or with a Mentor
teacher (selected by the SCC/ECE Mentor teacher
selection committee) off campus. Students will spend 8
hours in practicum, 1 hour in a teacher meeting, and 1
hour in seminar for a total of 10 hours per week.
During the first week of enrollment, students will be
required to be fingerprinted and cleared through
Department of Justice and have a negative TB skin test
at the District's expense. Formerly ECE 066. *One hour*
lecture, nine hours by arrangement.

CDFS   070   **3.0 Units**
Lifespan Human Development
Course Advisory: Eligibility for English 001. A survey of
human development throughout the life cycle,
including physical, social, intellectual, and emotional
development from conception to death. Includes direct
observation. Note: Not open for credit to students who
have successfully completed HUDV 038/039 or CDFS
038/039. Formerly HUDV 070. *Three hours lecture.*

Child Development and Family Studies

CDFS   071   **3.0 Units**
Language and Literature for ECE
Course Advisory: Eligibility for English 001 and CDFS 038. An introduction to children's literature and to the development of speech and language during early childhood. Students will explore teaching techniques which promote language acquisition including teacher-child interaction, story telling, puppetry, language games, flannel board stories, journaling, and the development of dramatic play materials. Culturally inclusive practices will be emphasized. Formerly ECE 071. *Three hours lecture.*

CDFS   072   **3.0 Units**
Art and Creative Development for ECE
Course Advisory: SCC minimum English and Math standards; CDFS 038. A study of art activities appropriate to the developmental needs of the young child. Emphasis is on children's use of art as a way to express their individuality and communicate their ideas about themselves and their world. Formerly ECE 072. *Three hours lecture.*

CDFS   073   **3.0 Units**
Music and Movement for ECE
Course Advisory: CDFS 038; Eligibility for English 001. Presents a curriculum of music appropriate for teachers of young children from infancy through the primary grades. Fundamentals of music and simple chording techniques will be introduced. Formerly ECE 073. Field trip may be required. *Three hours lecture.*

CDFS   074   **3.0 Units**
Science and Math for ECE
Course Advisory: CDFS 038 with a minimum grade of C; Eligibility for English 001 and SCC minimum Math standards. An exploration of scientific principles, materials, and information from the biological and physical sciences appropriate for young children. Through an emphasis on the choice and presentation of appropriate concepts and processes, students acquire basic science knowledge relevant to the intellectual development of the young child. Formerly ECE 070. Field trip may be required. *Three hours lecture.*

CDFS   075   **3.0 Units**
Care of Infants and Toddlers:
Social-Emotional Foundations
Course Advisory: Eligibility for English 001. This course examines relationship-based infant/toddler group care, with an emphasis on social-emotional development. Theoretical foundations of quality care are addressed including the importance of home-family connections, cultural continuity, and responsive practice. Skills for individualizing care, routines, and working with children with special needs are explored. Formerly ECE 075. *Three hours lecture.*

CDFS   076   **3.0 Units**
Care of Infants and Toddlers:
Curriculum and Environments
Course Advisory: Eligibility for English 001. Based on theory and an holistic approach to development, this course explores quality environments and curriculum for infants and toddlers. Through observation and assessment, students develop skills for creating meaningful cognitive, physical, literacy, and social/emotional experiences in group care. Formerly ECE 076. *Three hours lecture.*

CDFS   080   **3.0 Units**
Early Childhood Administration
Prerequisite: Minimum grade of C in both CDFS 038 and CDFS 062. Course Advisory: Eligibility for English 001. An overview of the fundamental duties and responsibilities of Early Childhood Administration, including preparation, implementation and evaluation of the program goals and budget controls. Meets requirements set by the California Commission on Teacher Credentialing for Site Supervisor and Program Director permit and State of California Community Care Licensing. Formerly ECE 080. *Three hours lecture.*

CDFS   081   **3.0 Units**
Early Childhood Staff Supervision
Prerequisite: Minimum grade of C in each CDFS 038, CDFS 050, and CDFS 062. Course Advisory: Eligibility for English 001. A presentation of the fundamentals involved in becoming a more effective supervisor and methods and procedures in dealing with selection, supervision and evaluation of staff in an early childhood setting. Meets the requirements set by the California Commission on Teacher Credentialing for the Site Supervisor and Program Director Permit and State of California Community Care Licensing. Formerly ECE 081. *Three hours lecture.*

Child Development and Family Studies

CDFS   082   **2.0 Units**
Adult Supervision: The Mentor Teacher
Prerequisite: Minimum grade of C in each CDFS 038, CDFS 050, and CDFS 062. Course Advisory: Eligibility for English 001. Methods and principles of supervising student teachers in early childhood classrooms. Emphasis on the role of experienced classroom teachers who function as mentors to new teachers while simultaneously addressing the needs of children, parents and other staff. Required for the Master Teacher, Site Supervisor, and Program Director Permits issued by the California Commission on Teaching Credentialing. Formerly ECE 079. *Two and three-quarters hours lecture (12-week course).*

CDFS   099   **1.0 or 3.0 Units**
Early Childhood Education Honors
Prerequisite: Completion of 24 units of college credit with a minimum GPA of 3.3; a minimum of 5 units in the discipline with a minimum grade of B; an ability to work independently; permission of the School Dean based on instructor availability. Course Advisory: Eligibility for ENGL 001. An independent study and research class in the areas of infant, toddler, and preschool early education programs. The student and instructor design an outlined program of study. Students may continue CDFS 099 over multiple semesters not to exceed 3 units. Formerly ECE 099. *Three to nine hours by arrangement.*

CDFS   101   **0.5 Unit**
**Sensitive and Critical Topics in
Early Childhood Education**
Course Advisory: SCC minimum English standard. A short course designed to include current topics in Child Development or Family Studies that are particularly sensitive in nature and/or subject to critical timing. It is designed especially as an update for teachers currently working in the field. Formerly ECE 101. *Eight hours lecture. (One day course).*

CDFS   102   **0.5 Unit**
Curriculum Development
Course Advisory: SCC minimum English standards. Curriculum development techniques for young children in early childhood education programs in the areas of speech development, pre-reading skills, math concepts, science activities, music, art, cooking and nutrition. Emphasis in the above curriculum areas will be placed on the specialized needs of disadvantaged children. Formerly ECE 102. *Eight hours lecture (1-week course).*

CDFS   105   **0.5 Unit**
Parenting in a Stressful World
Course Advisory: SCC minimum English and Math standards. This course is primarily designed for parents of young children (birth-five years). The course includes an overview of child development principles and an exploration of the role of parents in supporting the development of their children. The course will provide opportunities to explore and reflect on parenting in a stressful world and create a parent community. Discussions and assignments will relate directly to the participants interactions with young children. Formerly ECE 105. *One hour lecture (8-week course).*

CDFS   501   **Non-Credit**
Early Childhood Education Children's Program
Course Advisory: SCC minimum English standard. Provides the opportunity for parents to become more involved with their child(ren)'s education, to gain the positive interaction skills appropriate for this age group, and to gain information about the normal behavior of preschool aged children. Expected of parents whose children are enrolled in the Solano Community College Children's Programs. Formerly ECE 501. *One hour by arrangement.*

Communication Studies

Associate in Arts in Communication Studies for Transfer (ADT: A.A.-T)

Program Description
The Communication Studies Program is broad-based and concerned with the preparation and delivery of messages in interpersonal, public and business situations. This program focuses on understanding the communication process and improving communication skills. The program prepares the students to pursue professional goals in a variety of career possibilities including: Community College Teacher, Speech Writer, Communication Consultant, Lawyer, Minister, Personnel Director, Sports Broadcast Journalist, Public Relations, Political Campaign Aide, Sales, Counselor.

Associate in Arts Degree for Transfer
The Associate in Arts for Transfer (AA-T) in Communication Studies is especially appropriate for students who plan to complete a bachelor's degree in Communication Studies at a CSU campus. Students completing this degree (AA-T in Communication Studies) are guaranteed admission to the CSU system, but not to a particular campus or major. Students transferring to a CSU campus that does accept the AA-T in Communication Studies will be required to complete no more than 60 units after transfer to earn a bachelor's degree. This degree also prepares students for communication studies degree programs at other four-year institutions, but does not come with the same guarantees. In all cases, students should consult with a counselor for more information on university admission and transfer requirements.

To earn the Associate in Arts in Communication Studies for Transfer degree, a student must:
1. Complete 60 semester units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements
   b. A minimum of 18 semester units in a major or area of emphasis, as determined by the community college district.
2. Obtain a minimum grade point average of 2.0.

Program Outcomes
Students who complete the Associate in Arts in Communication Studies for Transfer Degree will be able to:
1. Critically evaluate speeches, debates, and other communicative performances.
2. Comprehend the skills and techniques necessary to be organized, confident communicators in a variety of classroom settings.
3. Understand the process of communication and communication methods in a multiple contexts.
4. Communicate utilizing a variety of performance methods.

REQUIRED COURSES . . . . **Units**
COMM 001 Introduction to Public Speaking 3
Choose two (2) courses (6 units) from List A 6
Choose two (2) courses (6 units) from List B 6
Choose one (1) course (3 units) from List C 3

List A – Choose any two (2) of the following courses (6 units):
COMM 006 Argumentation and Debate 3
COMM 010 Interpersonal Communication 3
COMM 008 Group Communication 3

List B – Choose any two (2) of the following (6 units):
COMM 002 Fundamentals of Persuasive Speaking 3
COMM 012 Intercultural Communication 3
COMM 015 Oral Interpretation of Literature 3
COMM 050 Forensics/Speech Workshop 1-4
COMM 060 Business and Professional Communication . 3
Any List A course not used above 3

List C – Choose one (1) of the following (3 units):
COMM 075 Sports Broadcasting 3
ANTH 002 Cultural Anthropology 3
PSYC 001 Introduction to Psychology 3
SOC 001 Introduction to Sociology 3
Any List A or List B course not used above 3

Recommended Electives
ENGL 002 Critical Thinking and Writing About Literature
ENGL 004 Critical Thinking and Composition: Language
       in Context
JOUR 001 Newswriting and Reporting
JOUR 011 Introduction to Mass Communication
PHIL 001 Introduction to Critical Thinking and Reasoning
THEA 001 Acting 1

Required Major Total Units 18
CSU General Education or IGETC Pattern Units . 37 - 39
CSU Transferable Electives
(as needed to reach 60 transferable units)* . . . . 9 - 11
Total Degree Units 60

6 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.

Communication Studies

COMM 001 3.0 Units
Introduction to Public Speaking
Course Advisory: Eligibility for English 001. A public speaking course which includes instruction and practice in the various forms of public address and the techniques for orally presenting ideas clearly, concisely, and coherently. Students are required to outline speeches frequently and/or complete a detailed manuscript of the speech; to read a college-level public speaking textbook and apply its principles in the preparation of their speeches; to critically analyze public speeches of various types. *Three hours lecture.*

COMM 002 3.0 Units
Fundamentals of Persuasive Speaking
Course Advisory: Eligibility for ENGL 001. A persuasive speaking course which includes instruction and practice in the various forms of persuasive speaking including, but not limited to, sales presentations, speeches of praise/blame, propaganda, and opposing viewpoints. Students are required to outline persuasive speeches frequently; to read a college-level persuasive speaking textbook and apply its principles in the preparation of their persuasive speeches; to critically analyze persuasive speeches; and to deliver persuasive speeches of various types. These speeches will be presented in class, in person to an audience of peers. Faculty evaluation will be done in the classroom in person. Formerly SPCH 002. C-ID COMM 190. *Three hours lecture.*

COMM 006 3.0 Units
Argumentation and Debate
Course Advisory: Eligibility for ENGL 001. A public speaking course which includes instruction and practice in the principles of argumentation and in the various forms of debate including the analysis of propositions, research, evidence and reasoning. Students are required to practice various forensic debating techniques through the presentation of their outlined advocate/government and opposition cases after investigating major contemporary issues; to read a college level argumentation and debate textbook and apply its principles in the preparation of their cases/and to critically analyze debate cases. These debates will be presented in class, in person to an audience of peers. Faculty evaluation will be done in the classroom in person. Formerly SPCH 006. *Three hours lecture.*

COMM 008 3.0 Units
Group Communication
Course Advisory: SCC minimum English standard. This course is designed to increase students' understanding of group communication behaviors related to problem-solving, decision-making, leadership, group roles, norms and conformity and to prepare students to function more effectively in groups. This course is designed for students majoring in speech communication, business, international business, education, nursing, and all fields of study and certifications that require group and team-building skills. Formerly SPCH 008. *Three hours lecture.*

COMM 010 3.0 Units
Interpersonal Communications
Course Advisory: Eligibility for English 001. Communication principles as applied to different interpersonal communication situations including verbal and non-verbal communication, listening, overcoming barriers to communication, and conflict resolution. Formerly SPCH 010. *Three hours lecture.*

COMM 012 3.0 Units
Intercultural Communication
Course Advisory: SCC minimum English standard. This course introduces students to the challenges and promises of intercultural communication with application to American culture, subcultures, and different cultures of the world. Specific focus will be development of the ability to acknowledge and understand the unique voice of people from the African, Asian, Latina, Middle Eastern, and Pacific Island cultures as well as co-cultures within the United States. Through lectures, readings, films, group discussions, written and oral assignments, students will learn the skills necessary to achieve positive outcomes when communicating with others that are perceived as different. Formerly SPCH 012. C-ID COMM 150. *Three hours lab.*

COMM 015 3.0 Units
Oral Interpretation of Literature
Course Advisory: Eligibility for English 001. Study of literature through oral performance that includes development of skills in the analysis and interpretation of prose, poetry, and dramatic literature. Emphasis on vocal and physical techniques to orally communicate understanding of the literature performed. Formerly SPCH 015. C-ID COMM 170. *Three hours lecture.*

Communication Studies

COMM 049   **1.0 to 3.0 Units**
Speech Honors
Prerequisite: Completion of 30 or more units of transferable college credit including 6 units of transferable speech; ENGL 001 with a minimum grade of B; an ability to work independently; and permission of the School Dean based on instructor availability. An independent study program designed for students who have completed the available Speech offerings and wish to continue work in one of these areas, or work with an instructor in a specialized area of oral communication. The student and instructor design an outlined program of study. Formerly SPCH 049. Students may take this course up to the maximum number of units over multiple semesters. *Three to nine hours by arrangement.*

COMM 050   **1.0 to 4.0 Units**
Forensics/Speech Workshop
Course Advisory: Eligibility for English 001. Provides training in the principles of all forms of competitive speaking, oral interpretation and debate, including participation in intercollegiate competition and appearances before campus and community groups. Students attend intercollegiate forensic tournaments and festivals or speak before campus or community audiences. Participation may include weekends and off campus travel. This is an Open entry/Open exit course. Formerly SPCH 050. Repeatable 3 times. C-ID COMM 160B. *One hour lecture, zero to nine hours lab.*

COMM 060   **3.0 Units**
Business and Professional Communication
Course Advisory: Eligibility for English 001. Presents practical communication skills to allow students to achieve effective verbal communication in business situations, community activities and other areas of daily life. Areas of discussion include giving and receiving the basic practical communication skills. Assignments and exercises are employed to allow students to achieve effective verbal communication in business situations, community activities, and other areas of daily life, including giving and receiving instructions, interviewing, verbal and non-verbal communication. Formerly SPCH 060. *Three hours lecture.*

COMM 075A   **3.0 Units**
Sports Broadcasting-Fall Sports
Course Advisory: Eligibility for ENGL 001. A professional approach to the basics of on-air and internet sports broadcasting of football, soccer, volleyball and tennis. Areas of concentration include performance training for play-by-play description, color commentary, compiling and organizing statistical data for football, soccer, volleyball and tennis broadcasts. The course includes an in-depth approach to careers in broadcast communication with concentration on all aspects of research preparation and delivery presentation to establish and sustain a career in sports broadcasting in one or more of the following sports: football, soccer, volleyball and/or tennis. Students will be required to attend weekly athletic events to fulfill activity hours. Events typically on TWRF. *One and one-half hours lecture, four and one-half hours lab.*

COMM 075B   **3.0 Units**
Sports Broadcasting - Spring Sports
Course Advisory: Eligibility for English 001. A professional approach to the basics of on-air and internet sports broadcasting of baseball, softball, basketball, hockey and swimming. Areas of concentration include performance training for play-by-play description, color commentary, compiling and organizing statistical data for baseball, softball, basketball, swimming and hockey broadcasts. The course includes an in-depth approach to careers in broadcast communication with concentration on all aspects of research preparation and delivery presentation to adequately and effectively establish and sustain a career in sports broadcasting in one or more of the following sports: baseball, softball, basketball, hockey and/or swimming. Students will be required to attend weekly athletic events to fulfill activity hours. Events typically on TWRFS. *One and one-half hour lecture, four and one-half hours lab.*

Communication Studies

COMM 080A   **3.0 Units**
TV Sports Production - Fall Sports
Course Advisory: Eligibility for English 001. Offers instruction and training in the fundamentals of televised sports productions, both in the studio and on location. The course focuses on all aspects of production: directing. board operation, computer graphics, videography, instant replay and pre and post production editing as it pertains to football, soccer, tennis and volleyball. Students required to attend weekly athletic events to fulfill activity hours. Events typically on TWRF afternoons and/or evenings. *One and one-half hour lecture, four and one-half hours lab.*

COMM 080B   **3.0 Units**
TV Sports Production - Spring Sports
Course Advisory: Eligibility for English 001. Offers instruction and training in the fundamentals of televised sports productions, both in the studio and on location. The course focuses on all aspects of production: directing. board operation, computer graphics, videography, instant replay and pre and post production editing as it pertains to basketball, baseball, softball, basketball, hockey and swimming. Students required to attend weekly athletic events to fulfill activity hours. Events typically on TWRFS afternoons and/or evenings. *One and one-half hours lecture, four and one-half hours lab.*

Computer Information Science

Computer Programming

Program Description
This program is designed to prepare the student for employment as a computer programmer trainee.

Certificate of Achievement and Associate in Science Degree
A Certificate of Achievement can be obtained upon completion of the 33-unit major listed below. The Associate in Science Degree may be obtained by completing a total of 60 units, including the major, general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Computer Programming Certificate of Achievement/Associate Degree will be able to:
1. Construct applications that use GUI (graphical user interface) components and access databases for data permanence.
2. Develop a programming solution to a data structure problem using object-oriented methodologies and appropriate data structures and algorithms.
3. Implement a well-designed, properly normalized relational database after analyzing user requirements and business rules.

Not all courses are offered every semester, and the sequence of courses listed below is recommended, not required.

REQUIRED COURSES . . . . Units
CIS 001 Introduction to Computer Science. 3
BUS 092 Business Communication 3
CIS 022 Introduction to Programming 3
CIS 055 MS Windows Operating Systems 3
CIS 023 Data Structures and Algorithms 3
CIS 015 Programming in Visual Basic.NET 3
CIS 089 Essential Networking Technologies 3
CIS 078 Access -Database Management System 3
CIS 052 UNIX Operating System
        (UNIX OPERATING SYST). 3
CIS 020 Assembly Programming 3
Elective(s) selected from the Recommended Electives . . . 3
    Total Units **33**

Select three (3) units from the following Recommended
Electives: . . . . Units
CIS 035 Introduction to Java Programming 3
CIS 060 Introduction to the Internet 1.5
CIS 061 Creating Web Pages 3
CIS 066 Microsoft Word 3
CIS 068 Object Oriented Game
        Programming with Flash 3
CIS 073 Microsoft Excel 3
CIS 080 SQL Database Management Systems 3
ACCT 001 Principles of Accounting - Financial 4
ACCT 002 Principles of Accounting – Managerial 4
BUS 005 Introduction to Business 3
OCED 090 Occupational Work Experience . . . . 1 - 8
OCED 091 General Work Experience . . . . 1 - 6

Note: Students planning to transfer to a four-year college and major in Management Information Systems/ Computer Science should see a counselor regarding Business Articulation Agreements for a particular university campus.

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Computer & Info Science: Computer Programming."

Computer Information Science

Microcomputer Applications

Program Description
This option is designed to prepare the student for employment as a microcomputer applications specialist.

Certificate of Achievement and Associate of Science Degree
A Certificate of Achievement can be obtained upon completion of the 30-unit major listed below. The Associate in Science Degree may be obtained by completing a total of 60 units, including the major, general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Microcomputer Applications Certificate of Achievement/Associate Degree will be able to:
1. Demonstrate knowledge of application software such as word processing, spread sheets, personal information management, database, operating systems, and networking, presentation and html editors.
2. Understand Visual Basic programming.
3. Effective oral and written communication.

REQUIRED COURSES . . . . **Units**
BUS 092 Business Communication 3
CIS 001 Introduction to Computer Science. 3
CIS 015 Programming in Visual Basic.NET 3
CIS 055 MS Windows Operating Systems 3
CIS 061 Creating Web Pages 3
CIS 066 Microsoft Word 3
CIS 073 Microsoft Excel 3
CIS 078 Access -Database Management System 3
CIS 089 Essential Networking Technologies 3
CIS 090 Introduction to PowerPoint. 1.5
CIS 091 Microsoft Outlook 1.5
    Total Units 30

Recommended Electives
CIS 020 Assembly Programming
CIS 022 Introduction to Programming
CIS 035 Introduction to Java Programming
CIS 060 Introduction to the Internet
CIS 066 Microsoft Word
CIS 080 SQL Database Management Systems
CIS 093 MS Publisher
ACCT 001 Principles of Accounting – Financial
ACCT 002 Principles of Accounting - Managerial
BUS 005 Introduction to Business
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Computer & Info Science: Microcomputer Applications."

Computer Information Science

Web Development and Administration

Program Description
This specialty is designed to prepare the student for employment as a web site administrator and developer.

Certificate of Achievement and Associate in Science Degree
A Certificate of Achievement can be obtained upon completion of the 33-unit major listed below. The Associate in Science Degree may be obtained by completing a total of 60 units, including the major, general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Web Development and Administration Certificate of Achievement/Associate Degree will be able to:
1. Properly use design elements and an html editor in creating web pages.
2. Describe and explain the use of a database in a website utilizing input forms, queries, and data base results.
3. Develop a project incorporating CSS, search forms, tables, photo galleries, shared borders, themes, interactive components, dynamic web pages and publish to a web site

REQUIRED COURSES . . . . Units
CIS 001 Introduction to Computer Science. 3
CIS 061 Creating Web Pages 3
CIS 062 Creating Web Interactivity with Flash 3
CIS 069 Multimedia for the Web 3
CIS 072 Extensible Markup Language (XML). 1.5
CIS 075 Client-Side Web Programming 3
CIS 080 SQL Database Management Systems 3
CIS 081 Server-Side Web Programming 3
CIS 083 Web Server Administration 3
CIS 089 Essential Networking Technologies 3
CIS 111 Web Design with Cascading Style Sheets 1.5
Elective(s) selected from the Recommended Electives . . . 3
    Total Units 33

Recommended Electives (Select three units)
CIS 015 Programming in Visual Basic.NET 3
CIS 022 Introduction to Programming 3
CIS 023 Data Structures and Algorithms 3
CIS 035 Introduction to Java Programming 3
CIS 068 Object Oriented Game Programming
      with Flash 3
CIS 078 Access -Database Management System 3
CIS 120 Developing XML Web Services. 1.5
CIS 121 PHP Programming with MySQL. 3

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Web Development & Administration."

Microsoft Office Master Job-Direct Certificate

The required courses must be completed with a grade of C or better.

REQUIRED COURSES . . . . Units
CIS 066 Microsoft Word. 3
CIS 073 Microsoft Excel 3
CIS 090 Introduction to PowerPoint. 1.5
CIS 093 MS Publisher 1.5
    Total Units 9

Microsoft Office Specialist Job-Direct Certificate

The required courses must be completed with a grade of C or better.

REQUIRED COURSES . . . . Units
CIS 066 Microsoft Word. 3
CIS 073 Microsoft Excel 3
CIS 078 Access -Database Management System 3
CIS 090 Introduction to PowerPoint. 1.5
CIS 091 Microsoft Outlook. 1.5
CIS 093 MS Publisher 1.5
    Total Units 13.5

Computer Information Science

Database Specialist Job-Direct Certificate

The required courses must be completed with a grade C or better.

REQUIRED COURSES . . . . **Units**
CIS 072 Extensible Markup Language (XML) 1.5
CIS 078 Access -Database Management System 3
CIS 080 SQL Database Management Systems 3
   Total Units **7.5**

Web Developer Job-Direct Certificate

The required courses must be completed with a grade of C or better.

REQUIRED COURSES . . . . **Units**
CIS 001 Introduction to Computer Science. 3
CIS 061 Creating Web Pages 3
CIS 069 Multimedia for the Web 3
CIS 072 Extensible Markup Language (XML) 1.5
CIS 075 Client-Side Web Programming 3
CIS 081 Server-Side Web Programming 3
   Total Units **16.5**

Computer Applications Specialist Job-Direct Certificate

The required courses must be completed with a grade of C or better.

REQUIRED COURSES . . . . **Units**
BUS 100 Work Readiness 1.5
CIS 066 Microsoft Word 3
CIS 073 Microsoft Excel 3
CIS 078 Access -Database Management System 3
   Total Units **10.5**

Web Programmer Job-Direct Certificate

The required courses must be completed with a grade of C or better.

Program Outcomes
Students who complete the Job Direct Certificate will be able to:
   1. Use design elements and an html editor in creating web pages.
   2. Use visual basic to develop forms, tables, database, database queries, and reports.
   3. Develop and publish to a web site a project incorporating Java programming for popups and client sided programming, dynamic web pages.

REQUIRED COURSES . . . . **Units**
CIS 015 Programming in Visual Basic.NET 3
CIS 035 Introduction to Java Programming 3
CIS 068 Object Oriented Game Programming
       with Flash 3
CIS 075 Client-Side Web Programming 3
CIS 081 Server-Side Web Programming 3
   Total Units **15**

Computer Information Science

CIS 001   **3.0 Units**
Introduction To Computer Science
Course Advisory: SCC minimum English and Math standards; keyboarding 30 wpm. An introduction to the hardware and software components of basic computer information systems. Also, an examination of information systems and their role in business. A review of historical, social and cultural implications of computer technology in today's society. Course content will include hands-on familiarization with a computer operating system and common application software. Additionally, the course includes an introduction to computer programming using the Visual Basic .Net language. Students will learn to develop problem specifications, detailed analysis, design algorithms, and construct structured computer programs. *Three hours lecture, one hour lab.*

CIS 015   **3.0 Units**
Programming In Visual Basic.NET
Prerequisite: CIS 001 with a minimum grade of C; Course Advisory: SCC minimum English and MATH standards. An introductory course in Object Oriented Programming (OOP) using Visual Basic.NET, emphasizing problem-solving techniques using structured design and development. An extensive coverage of the Visual Basic computer language will be conducted using the Microsoft.Net environment. Students will construct forms and define procedures, events, properties, methods and objects to solve a variety of business-oriented problems. *Three hours lecture, one hour lab.*

CIS 020   **3.0 Units**
Assembly Programming
Prerequisite: CIS 015 or 022 or 035 with a minimum grade of C. Course Advisory: SCC minimum English and Math standards. A hardware-oriented programming course dealing with programming a computer at the assembler language level. Emphasis will be on the assembly language of computers. *Three hours lecture, one hour lab.*

CIS 021   **3.0 Units**
Discrete Structures for Computer Science
Course Advisory: Successful completion of MATH 104. Prerequisite: CIS 023 with a minimum grade of C; Math 020 with a minimum grade of C. This course is an introduction to the discrete structures used in Computer Science with an emphasis on their applications. Topics covered include: Functions, Relations and Sets; Basic Logic; Proof Techniques; Basics of Counting; Graphs and Trees; and Discrete Probability. C-ID COMP 152. *Two hours lecture, three hours lab.*

CIS 022   **3.0 Units**
Introduction to Programming
Prerequisite: CIS 001 with a minimum grade of C. Course Advisory: SCC minimum English and Math standards. An introduction to computer programming. The course's content will include 'hands-on' development of structured algorithms and programs through top-down design, modular and object oriented programming, and standardized control structures. (Taught using an object-oriented computer programming language such as C++, C#, Java, etc.). *Three hours lecture, one hour lab.*

CIS 023   **3.0 Units**
Data Structures And Algorithms
Prerequisite: CIS 022 with a minimum grade of C. Course Advisory: SCC minimum English and Math standards. A study of the basic concepts associated with the creation and manipulation of data structures and their related processing algorithms. Topics include software engineering principles, the selection, design, and implementation of data structures including arrays, sequential and random access files, strings, stacks, queues, linked lists, and binary trees, and the development of efficient algorithms for sorting, searching, and manipulating these data structures. (Taught using an object-oriented computer programming language such as C++, C#, Java, etc.) *Two hours lecture, three hours lab.*

Computer Information Science

CIS   035   3.0 Units
Introduction to Java Programming
Prerequisite: A minimum grade of C in CIS 015 or CIS 022 or CIS 023. *Course Advisory: SCC minimum English and Math standards.* Introduces Object Oriented Programming (OOP) using the Java programming language. Includes hands-on development of Java applets and Java applications using objects, classes, interfaces and Graphical User Interface (GUI) components. *Two hours lecture, three hours lab.*

CIS   049   1.0 to 3.0 Units
Computer Programming Honors
Prerequisite: Completion of 24 units of college credit with a minimum GPA of 3.3; a minimum of 5 units in the discipline with a minimum grade of C; an ability to work independently; permission of the School Dean based on instructor availability. Course Advisory: SCC minimum English and Math standards. Designed for honor students who intend to major in one of the Computer and Information Science options. Students are expected to design their own projects and must submit them to the instructor for approval. Students may take this course up to the maximum number of units over multiple semesters. *Three to nine hours by arrangement.*

CIS   050   3.0 Units
Microcomputer Applications
Course Advisory: Basic keyboarding skills at 30 wpm; SCC minimum English and Math standards. This course will serve as an introduction to microcomputers and the more frequently used applications software. The course is designed for the microcomputer user who is not a computer science major. The purpose of this course is to help students to understand the concepts and fundamentals of working with: an operating system with its associated graphical user interface, word processing, spreadsheets, databases and presentation software. *Three hours lecture.*

CIS   052   3.0 Units
UNIX Operating System
Course Advisory: CIS 055 with a minimum grade of C or P; SCC minimum English and Math standards. This course will analyze the UNIX operating system, its terminology, user utilities, file structure, file security, commands, shells, shell programming, system architecture, and system administration. Emphasis will be placed on the shell environment, shell programming and utilities. The course will include hands-on exercises for the students to complete using the UNIX operating system (Currently taught using LINUX). *Three hours lecture.*

CIS   055   3.0 Units
MS Windows Operating Systems
Course Advisory: CIS 001 with a minimum grade of C or P; basic keyboarding skills. Students will learn how to use the Graphical User Interface (GUI) and the command line interface in carrying out system tasks in the MS Windows operating systems. Topics include file management, hard disk management, system tools, batch files, connectivity, and the registry. *Three hours lecture.*

CIS   060   1.5 Units
Introduction to the Internet
Course Advisory: SCC minimum English and Math standards. Designed to prepare students to use the Internet, a world wide computer network. Emphasis is on introducing features of the Internet, including electronic mail, the World Wide Web, Gopher, FTP (file transfer protocol), Telnet, and Usenet, as well as other Internet services and utilities. Students will explore hands-on the vast resources of the Internet, learn to access information using a variety of methods, and will construct a simple Web page. *Three hours lecture. (8-week course).*

CIS   061   3.0 Units
Creating Web Pages
Course Advisory: CIS 001; SCC minimum English and Math standards. This course is designed to prepare students to develop web sites that interact with databases. Emphasis is on the creation of Web sites with interactive Web pages, data access Web pages, and web pages with interactive components. Students will explore hands-on access to the Internet and an HTML editor to create and maintain Web sites. *Three hours lecture.*

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CIS 062   **3.0 Units**
Creating Web Interactivity with Flash
Course Advisory: CIS 001 with a minimum grade of C or P; CIS 061 with a minimum grade of C or P; SCC minimum English and Math standards. This course covers the creation of vector-based graphics, animation, and interactivity within the Web environment. Emphasis will be placed on applying design principles to the elements of motion and interactivity. The basic operating principles of Macromedia Flash will be applied in order to create Web sites with animation, interactive buttons, and sound. Issues of optimal delivery and web accessibility will also be covered. A portfolio-quality professional level capstone project will be developed and presented. *Three hours lecture.*

CIS 066   **3.0 Units**
Microsoft Word
Course Advisory: CIS 001 or CIS 050 with a minimum grade of C or P; ability to keyboard at 30 wpm. Provides an in-depth study of the functions of the word processing program. Students will learn how to use basic and advanced program features to create and design business documents. *Three hours lecture.*

CIS 068   **3.0 Units**
Object Oriented Game Programming With Flash
Prerequisite: CIS 062 with a minimum grade of C. Course Advisory: CIS 001 with a minimum grade of C or P; SCC minimum English and Math standards. Using solid programming techniques and the fundamental concepts of Object Oriented Programming, students will use Macromedia Flash ActionScript to create multimedia games. This process includes designing, coding, testing, debugging and documenting Flash ActionScript programs. Additionally, students will apply these concepts to the creation of game programs that utilize digital media including images, animation, audio, video, and text. *Three hours lecture.*

CIS 069   **3.0 Units**
Multimedia For The Web
Course Advisory: CIS 061 with a minimum grade of C; SCC minimum English and Math standards. Takes an in-depth look at designing multimedia for the Web. Topics include developing graphic elements such as buttons, background textures and images for a Web site, using Cascading Style Sheets to position graphics, using Dynamic HTML to create web site interactivity, adding audio and/or video to a Web site, and manipulating Web multimedia file formats. *Three hours lecture.*

CIS 070   **3.0 Units**
Adobe Photoshop for the Web
Course Advisory: SCC minimum English and Math Standards. CIS 001 or CIS 050 with a grade of Pass or better or equivalent. This course emphasizes the use of computer technology to create and manipulate raster and vector digital images. Students use Photoshop techniques to produce digital creations for the web. Layers, filter effects, blending modes, and other editing tools will be used to produce digital images appropriate for print and electronic reproduction. The elements of Photoshop for use in industry-standard web and print production will be explored in this course. *Three hours lecture.*

CIS 072   **1.5 Units**
Extensible Markup Language (XML)
Course Advisory: CIS 001 with a minimum grade of C; CIS 061 with a minimum grade of C; SCC minimum English and Math standards. Introduces Extensible Markup Language. Students will learn how to create XML documents and use XML-based markup languages. *Three hours lecture (8-week course).*

CIS 073   **3.0 Units**
Microsoft Excel
Course Advisory: CIS 001 with a minimum grade of C or P; ability to keyboard at 30wpm. Provides a thorough study of spreadsheet operation and enables the student to use the spreadsheet to perform mathematical computations and analysis. Students will create graphic representations of the information contained in a spreadsheet, perform list management routines, use functions, perform 'what if' analysis, customize toolbars and menus, and create macros using Visual Basic for Applications. *Three hours lecture.*

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CIS   075   3.0 Units
Client-Side Web Programming
Course Advisory: CIS 001 with a minimum grade of C; CIS 061 with a minimum grade of C; SCC minimum English and Math standards. Focuses on the enhancement of Web pages by adding interactivity and functionality through the use of client-side programming. *Three hours lecture.*

CIS   078   3.0 Units
Access - Database Management System
Course Advisory: CIS 001 with a minimum grade of C. An introduction to relational database management using microcomputers. Micosoft's Access database management program is used. Students will learn how to create and maintain relational database structures, organize and manipulate data, ask questions of the data, create custom forms for entering data and custom reports for printing the data. How to publish objects on the Internet's World Wide Web is presented. The student will learn how to construct a complete application combining previously created tables, queries, forms, and reports. Visual BASIC Applications (VBA) and Structured Query Language (SQL) are introduced. Advanced database design is explored and the student learns how to 'normalize' a database structure. *Three hours lecture.*

CIS   080   3.0 Units
SQL Database Management Systems
Prerequisite: CIS 078 or equivalent with a minimum grade of C. Course Advisory: SCC minimum English and Math standards. Designed for the student who needs knowledge and skills about advanced database systems that use the SQL language such as IBM's DB2, Oracle, Sybase and Microsoft's SQL Server. This course is designed for the end user, the database designer and the database administrator. Microsoft SQL Server 2008 is the database system currently used for this course. *Three hours lecture.*

CIS   081   3.0 Units
Server-Side Web Programming
Course Advisory: CIS 001 with a minimum grade of C; CIS 061 with a minimum grade of C; SCC minimum English and Math standards. Emphasizes the creation of interactive web sites using a server-sided scripting language such as ASP.Net, CGI, or Perl. Topics include core features of the server-side scripting language, control structures, functions, arrays, form validations, regular expressions, environmental variables, and database-driven web applications. *Three hours lecture.*

CIS   083   3.0 Units
Web Server Administration
Course Advisory: CIS 001 with a minimum grade of C; CIS 061 with a minimum grade of C; SCC minimum English and Math standards. This course covers web server installation and administration for the internet and intranet. Topics covered include the installation, configuration, management and tuning of web services, security, online transaction processing, and FTP services. *Three hours lecture.*

CIS   085   3.0 Units
Digital Publishing with InDesign
Course Advisory: SCC minimum English and Math Standards CIS 001 or CIS 050 with a grade of Pass or better or equivalent. An introduction to the graphics software program, Adobe InDesign. Students will learn to produce and publish publications, employing vector graphics, and typography as well as color and print management. This course will establish an understanding of the basic features in Adobe InDesign for use in both print and digital media. *Three hours lecture.*

CIS   087   3.0 Units
Adobe Illustrator for the Web
Course Advisory: SCC minimum English and Math standards; CIS 001 or CIS 050 with a grade of P or better or equivalent. An introduction to the graphics software program, Adobe Illustrator. Students will learn to create vector shapes, import, export and modify graphics, and use Illustrator tools. This course will establish an understanding of the basic features in Adobe Illustrator for use in digital media. *Three hours lecture.*

Computer Information Science

CIS 089   **3.0 Units**
Essential Networking Technologies
Course Advisory: CIS 001 with a minimum grade of C or P; SCC minimum English and Math standards. An introductory course starting with a general overview of networking. Network design, media, protocols, architectures, operations, and administration will be discussed. Local area networks, wide area networks, and network connectivity (including Internet) are covered. This course is the foundation of all other network classes and helps prepare the student to be successful when taking various certified examinations. *Three hours lecture.*

CIS 090   **1.5 Units**
Introduction To PowerPoint
Course Advisory: CIS 001 or CIS 050 with a minimum grade of C; ability to keyboard. This course introduces features and design concepts utilized in developing powerful presentations using a package software such as Microsoft PowerPoint. *Three hours lecture (8-week course).*

CIS 091   **1.5 Units**
Microsoft Outlook
Course Advisory: CIS 001 or CIS 050 with a minimum grade of C; basic keyboarding skills; SCC minimum English standard. Students get started using Outlook's features; working with the Contact address book; Inbox and e-mail; Journal; Notes; Tasks; use Calendar to track and schedule appointments, events and meetings; work with forms and templates; use Outlook with other applications. *Three hours lecture (8-week course).*

CIS 093   **1.5 Units**
MS Publisher
Course Advisory: CIS 001 or CIS 050 with a minimum grade of C; SCC minimum English and Math standards. Provides 'hands-on' experience in the Microsoft Publisher desktop publishing computer program. Students will learn to produce camera ready, near-typeset quality reports, brochures, newsletters, labels, cards, and business forms. *Three hours lecture (8-week course).*

CIS 110   **1.5 Units**
Wireless Lans
Course Advisory: CIS 001 with a minimum grade of C or P; SCC minimum English and Math standards. This course is designed to instruct students on planning, designing, installing and configuring wireless LANs. The course offers in-depth coverage of wireless networks with extensive step-by-step coverage of IEEE 802.11b/a/g/pre-n implementation, design, security, and troubleshooting. *Three hours lecture, one hour lab (8-week course).*

CIS 111   **1.5 Units**
Web Design with Cascading Style Sheets
Course Advisory: CIS 061 with a minimum grade of C; SCC minimum English and Math standards. This course is intended for students and Web Professionals who have a working knowledge of Web design and HTML and want to use cascading style sheets to control the display and formatting on a Web site or any other application that uses CSS. *Three hours lecture (8-week course).*

CIS 112   **3.0 Units**
Introduction to Robotics Programming
Prerequisite: CIS 001. Course Advisory: SCC minimum English and Math standards. The student will be introduced to Programming a 360-degree, 5-axis articulating arm via the Industry Standard Smart Terminal hand held computer and the PC interface. The student will learn all the basic physical parts of the system. Additionally, the student will learn to utilize many of the 150 programming language commands to maniuplate the robot to do work in three dimensional work spaces over time. Furthermore, the student will learn and implement Industry Standard Robotic Safety Standards in the work place. *Three hours lecture.*

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CIS 113   **3.0 Units**
Introduction to Programmable Logic Controllers
Prerequisite: CIS 001. Course Advisory: SCC minimum English and Math Standards. The student will be introduced to how to design, program and operate the Programmable Logic Controller (PLC) to control a number of process applications used by industries all over the world. The Programmable Logic Controller (PLC) is a microprocessor-based controller designed to provide easily programmed control of almost any type of process. The student will learn to program Input Modules, Output Modules, Processor Module, Power Supply, Programming device, and I/O chassis. *Three lecture hours.*

CIS 120   **1.5 Units**
Developing XML Web Services
Prerequisite: CIS 072. Course Advisory: CIS 001 and SCC minimum English and Math Standards. This course introduces the fundamental Web services architecture and its core technologies, including XML, XML Schema, SOAP, WSDL, and UDDI with the focus on writing, testing, and debugging a Web service such as a credit card validation Web service. *Three hours lecture, one hour lab by arrangement (8-week course).*

CIS 121   **3.0 Units**
PHP Programming with MySQL
Course Advisory: SCC minimum English and Math standards; CIS 061; CIS 001. This course teaches Web development with PHP and MySQL. It presents the basics of PHP and MySQL along with advanced topics including object-oriented programming and how to build Web sites that incorporate authentication and security. Upon completion of this course, students should be able to use PHP and MySQL to build professional quality, database-driven Web sites. Additionally, students will become proficient with the administration and maintenance of a MySQL database. *Three hours lecture, one hour lab by arrangement.*

CIS 162   **4.0 Units**
A+ Computer Hardware Technology
Course Advisory: SCC minimum English and Math standards. Presents the structure of modern personal computer architecture including the names, purpose, and characteristics of components; such as motherboards, CPUs, RAM, disk drive storage, printers and networks. This course also addresses upgrading computer components, optimizing computer performance, preventative maintenance, safety, and computer hardware troubleshooting. Prepares the student for CompTIA A+ Hardware Service Technician Certification. (Formerly ECTN 126). *Three hours lecture, three hours lab.*

CIS 164   **4.0 Units**
A+ Computer Operating Systems Technology
Course Advisory: ECTN 126, SCC minimum English and Math standards. Presents the purpose and capabilities of computer operating systems, operating system components and utilities. The course emphasizes initial investigation of personal computer operating systems and demonstrates the uses of the operating system and other software for isolating troubles and completing the repair of personal computers. Prepares the student for CompTIA A+ Operating Systems Technologies certification. (Formerly ECTN 128). *Three hours lecture, three hours lab.*

CIS 166   **4.0 Units**
Computer Network + Technology
Course Advisory: SCC minimum English and Math Standards. Presents the architecture of computer networks, including the names, purpose, and characteristics of network components; such as network interface card (NIC), hubs, routers, cabling and connectors; as well as topologies, protocols and standards. This course also addresses network implementation, network support and troubleshooting. Prepares the student for CompTIA Network+ Computer Network Certification. As a team, in a laboratory environment, the class will assemble and implement a complete network, with a server running a Microsoft server network operation system (NOS) and several computers running the Microsoft Windows XP Professional Operating System. All of the required cabling will be assembled in the lab by the students under the supervision of the instructor. (Formerly ECTN 122). *Three hours lecture, three hours lab.*

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CIS   168   4.0 Units
Computer Security+ Technology
Prerequisite: A minimum grade of C in either CIS 166 or ECTN 122. Course Advisory: SCC minimum English and Math standards. Presents the vulnerability, threats, and risks to data and other computer assets from spyware, Trojan horses, viruses, worms, and other security attacks. This course also addresses the fundamental policies and procedures for maintaining the security of a computer network. Prepares the student for the Computing Technology Industry Association's (CompTIA) Security+ Certification. (Formerly ECTN 124). *Three hours lecture, three hours lab.*

CIS   172   1.5 Units
Computer Forensics: Evidence Recovery
Course Advisory: SCC minimum English and Math standards. Introduces the student to the physical aspects of data collection from computer systems and computer networks. The student is introduced to the hardware and software used to collect data, the techniques used to ensure integrity and preserve data, and the requirements of preparing collected data for later forensic investigation. Students will learn to process a digital crime scene as well as the corporate environment for both criminal/civil cases and incident response. (Formerly ECTN 172). *One hour lecture, one and one-half hours lab.*

CIS   173   3.0 Units
Computer Forensics Investigations
Prerequisite: CIS 001. Course Advisory: Eligibility for English 001 and SCC minimum Math standard. Introduces the student to the tools and techniques of preserving and investigating digital evidence in a systematic and scientifically reliable manner using modern computer forensic software applications. The student is introduced to the interpretation and analysis of recovered data for the purpose of collecting legal evidence. Student is exposed to data in an array of formats and applications from several computer types and operating systems as well as deleted, encrypted, and damaged information. Evidence reporting practices are also introduced. (Formerly ECTN 173). *Two hours lecture, three hours lab.*

CIS   174   3.0 Units
Computer Forensics: Operating Systems Internals
Prerequisite: Minimum grade of C in either CIS 173 or ECTN 173. Course Advisory: SCC minimum English and Math standards. Students will explore the internal workings of computer operating systems and perform forensic examinations of various operating systems. Students will analyze FAT, NTFS, Ext2, Ext3, UFS1, and UFS2 file systems and data structures. Students will learn to recognize systems that have been compromised by viruses or other intrusive programs, and will be able to locate corrupt, hidden or deleted data. (Formerly as ECTN 174). *Two lecture hours, three hours lab.*

Cosmetology

Cosmetology

Program Description
The program consists of sixteen hundred (1600) hours of intensive training and study designed to prepare the student to take the California State Board of Cosmetology examination for licensure. Units include theory and practice in fundamental skills in all phases of beauty culture. Assignment of units is based on hours in attendance. See the Course Description portion of the Catalog for prerequisite requirements for admission to the program.

Transfer students will be accepted on a space-available basis providing they have not achieved more than 500 certified hours of training.

Certificate of Achievement and Associate in Science Degree
A Certificate can be obtained by completing the 49.5-unit major listed below. The Associate in Science Degree can be obtained by completing a minimum of 66 units, including the major of at least 49.5 units and the general education requirements. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Cosmetology Certificate of Achievement/Associate Degree will be able to:
1. Translate and identify the differences between chemical and non-chemical changes as related to Cosmetology.
2. Employ and demonstrate the theories as related to sanitation, sterilization and rules and regulations as mandated by the Cosmetology Act and the Rules and Regulations - State approved textbooks.
3. Interpret and apply cosmetological theories as required for theoretical and practical applications.
4. Contrast and compare the skills and concepts as required by the California State Board of Barbering and Cosmetology.
5. Mandated Clinic Laboratory hours completed - Desk and Reception Training - Business and Communication skills developed - Sales and retail product knowledge.

REQUIRED COURSES . . . . Units
COSM 100 Cosmetology I 12.5
COSM 101 Cosmetology II. 12.5
COSM 102 Cosmetology III 12.5
COSM 103A Cosmetology IV 6
COSM 103B Cosmetology V 6
OR
COSM 175 Cosmetology Education Practicum 6
   Total Units 49.5

Recommended Electives:
COSM 103A Cosmetology IV
COSM 103B Cosmetology V
COSM 104A Esthetics of Skin Care I
COSM 104B Esthetics of Skin Care II
COSM 111 Special Hair Processes
COSM 112 Basic Hairstyling
COSM 113 Advanced Hairstyling
COSM 114 Brush-Up and/or Supplemental Training
COSM 115 Cosmetology Instructor Training I
COSM 116 Cosmetology Instructor Training II
COSM 117 Special Manicurist
COSM 175 Cosmetology Education Practicum
OCED 070 Occupational Soft Skills
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

NOTE: First time students to the Cosmetology Program will be required to attend an orientation meeting and purchase a materials card at registration in addition to the registration fees. The cost of the materials card and start-up materials exceeds $2,000. For more information see the schedule of classes or call the Cosmetology Department at (707) 864-7000 ext. 4389.

The Cosmetology program is approved by the California State Board of Barbering and Cosmetology.

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Cosmetology."

Cosmetology

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COSM 100   **13.0-17.5 Units**
Cosmetology I

Course Advisory: SCC minimum English and Math standard. This is the first course in a series of courses that provides the fundamental training towards the state mandated minimum hours designed to prepare the student for the California State Board of Cosmetology examination for licensure. A combination of both lecture and laboratory activities introduces the student to theoretical concepts, principles and practice in the beauty industry. Critical thinking skills are developed in the areas of communication, hair care, nail care, record keeping, and business decorum. A combination of 80 lecture hours and 600 lab hours for day students to earn 17.5 units and a combination of 80 lecture hours and 360 lab hours for evening students to earn 13 units each term. Students enrolling in this course must attend the mandatory information sessions. See the schedule of classes for location, dates and times. At the time of registration students must pay a Material's Fee with enrollment fees to the office of Admissions and Records. Students are required to purchase an equipment kit. The cost of the materials fee and start-up materials varies. For more information, current prices, textbooks, and ordering the equipment kit call the Bookstore at (707) 864-7111 or www.solano.bncollege.com. To qualify for the State Board of Cosmetology examination for a cosmetology license, students must have completed all state mandates including the following: a minimum of 1600 clocked hours, designated subject areas of technical instruction, designated subject areas of practical operations, completed the 10th grade or the equivalent, be at least 17 years of age, and has a current state of federally issued photo graphic identification. For more information; ***www.barbercosmo.ca.gov.*** *Twenty two and one-half or thirty seven and one-half hours lab*

COSM 101   **12.5 Units** (Effective Fall 2016)
Cosmetology II   **13.0-17.5 Units** (Effective Spring 2017)
Prerequisite: COSM 100 with a minimum grade of C. The second of a series of courses in Cosmetology to provide the training towards the state mandated hours of intensive training and study designed to prepare the student for the California State Board of Cosmetology examination for licensure. Focus is on the continued study of beauty industry. This course provides the students with the opportunity to synthesize and utilize cosmetology knowledge and skills in providing more advanced services for multiple clients. All students enrolling in COSM 101 must pay a Material's Fee with enrollment fees to the Admissions and Records office at the time of registration. The cost of the materials fee and start-up materials varies. *Five hours lecture, twenty-two and one-half hours lab (effective Fall 2016); Five hours lecture, twenty-five hours or thirty-seven and one-half hours lab (effective Spring 2017).*

COSM 102   **12.5 Units** (Effective Fall 2016)
Cosmetology III   **6.0-8.5 Units** (Effective Spring 2017)
Prerequisite: COSM 101 with a minimum grade of C. The third in a series of courses in Cosmetology designed to provide the training towards the state mandated hours and prepare the student for the California State Board of Cosmetology examination for licensure. Topics include the principles and practices of cosmetology with emphasis on the essential knowledge and skills for licensure and working within the cosmetology industry. Students are able to increase practical application skills and processes by providing multiple clients with hair care, skin care and nail care services in the patron laboratory. All students enrolling in COSM 102 must pay a Material's Fee with enrollment fees to the Admissions and Records office at the time of registration. The cost of the materials fee and start-up materials varies. *Five hours lecture, twenty-two and one-half hours lab (effective Fall 2016); Five hours lecture, twenty-five hours or thirty-seven and one-half hours lab, 8 weeks (effective Summer 2017)*

Cosmetology

COSM 103A **6.0 Units**
Cosmetology IV
Prerequisite: A minimum grade of C in COSM 100, 101, and 102. Designed to meet the needs of students who are preparing to go to the state exam. Review over the basic skills that are required to pass the tests by practice and study. Reinforce the entry level skills expected from the industry. NOTE: All students enrolling in COSM 112 must pay a Material's Fee with enrollment fees to the Admissions and Records office at the time of registration. The cost of the materials fee and start-up materials varies. Formerly COSM 103. *Five hours lecture, twenty-one hours lab (8-week couse).*

COSM 103B **6.0 Units**
Cosmetology V
Prerequisite: COSM 103A or COSM 175. Course Advisory: SCC minimum English and Math standards. Provides the application of theoretical skills to increase performance proficiencies and accrue the hours as mandated by the State Board of Barbering and Cosmetology. Students are required to have the mandatory books and equipment kit as required in the concurrent course by the first class meeting. Students are required to pay a materials fee at the time of registration. The cost of the materials fee varies. For current costs, please refer to the schedule of classes for each semester. *Four hours lecture, twenty four hours lab (8-week course).*

COSM 104A **15.0 Units**
Esthetics of Skin Care I
Prerequisite: Tenth grade completion or equivalent and 18 years of age as required by the State Board of Barbering and Cosmetology. Course Advisory: SCC minimum English standard. A two semester course series in skin care consisting of 600 hours. Designed to prepare the student for the California State Board of Barbering and Cosmetology examination for Esthetician licensure. An intensive study of basic and advanced technological concepts in European facialing techniques. The curriculum framework provides the theoretical, manual, and mechanical skills needed for a profession in esthetics. NOTE: Students are required to purchase a mandatory equipment kit and materials card at the SCC bookstore. The cost of the materials card and start-up materials varies. For current costs, please refer to the Schedule of Classes for each semester. Additionally, students are required to attend the mandatory Cosmetology information session (see Schedule of Classes for the date and time). *Five hours lecture, thirty hours lab.*

COSM 104B **6.0 Units**
Esthetic Skin Care II
Prerequisite: COSM 104A. A continuation of COSM 104A providing additional in-depth training for more advanced skin care techniques and methodologies. Designed to prepare the student for the California State Board of Barbering and Cosmetology examination for Esthetician licensure. NOTE: Students will be required to purchase a mandatory materials card from the SCC bookstore. The cost of the materials card and start-up materials varies. For current costs, please refer to the Schedule of Classes for each semester. *Five hours lecture, twenty-one hours lab (8-week course).*

COSM 105A **9.5 Units**
Fundamentals of Esthetics
Prerequisite: Tenth grade completion or equivalent; and 18 years of age as required by the State Board of Barbering and Cosmetology. Course Advisory: SCC minimum English and Math standards. The first of a two-part class designed to introduce students to the basic knowledge and skills to qualify them to take the state licensing exam in esthetics. Topics include the treatments, facials, makeup, and hair removal processes as well as a thorough understanding of the business aspects, general facial procedures, the human anatomy, chemistry, ingredients, electricity, sanitation and health and safety associated with this field. NOTE: All students enrolling in COSM 105A must pay a Material's Fee with enrollment fees to the Admissions and Records office at the time of registration. The cost of the materials fee and start-up materials varies. Additionally, students are required to attend the mandatory Cosmetology information session (see schedule of Classes for the information session date and time). This class is not open to students enrolled in COSM 104A. *Four and one-half hours lecture, and fifteen hours lab.*

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COSM 105B   9.5 Units
Advanced Fundamentals of Esthetics
Prerequisite:Tenth grade completion or equivalent and 18 years of age as required by the State Board of Barbering and Cosmetology; completion of COSM 105A. Course Advisory: SCC minimum English and Math standards. This course continues the basic skills practice and technical training from COSM 105A to qualify students for state licensure. It expands the knowledge of the practices, techniques, products, chemicals, laws and advanced procedures used in the current field of Esthetics. NOTE: Students will be required to purchase a mandatory materials card from the SCC bookstore. The cost of the materials card and start-up materials varies. For current costs, please refer to the schedule of classes for each semester. This class is not open to students who have completed COSM 104A or students enrolled in COSM 104B. *Four and one-half hours lecture, fifteen hours lab.*

COSM 110   6.0 Units
Introduction to Cosmetology
Course Advisory: SCC minimum English standard. To acquaint students with cosmetology career opportunities and the industry options available. A survey of the concepts and processes utilized in the beauty industry. NOTE: All students enrolling in COSM 110 must pay a Material's Fee with enrollment fees to the Admissions and Records office at the time of registration. The cost of the materials fee and start-up materials varies. *Five hours lecture, twenty hours activities. (6-week course).*

COSM 111   2.0 Units
Special Hair Processing
Prerequisite: Current California State Cosmetology License or COSM 100 (may be taken concurrently). Course Advisory: SCC minimum English standard. This course is designed to teach theory and practice in the thermal and chemical processes used in the curling, straightening and waving of hair. NOTE: Students are required to purchase a materials card from the SCC bookstore. The cost of the materials card and start-up materials varies. For current costs, please refer to the Schedule of Classes for each semester. *One hour lecture, three hours lab.*

COSM 112   2.0 Units
Basic Hairstyling
Prerequisite: Current California State Cosmetology License or completion of COSM 100. Course Advisory: SCC minimum English standard. This course is designed to provide licensed operators and students enrolled in the Solano College Cosmetology day program with a fundamental knowledge of basic styling and hair cutting skills. NOTE: Students are required to buy a materials card from the SCC bookstore. The cost of the materials card and start-up materials varies. For current costs, please refer to the Schedule of Classes for each semester. *One hour lecture, three hours lab.*

COSM 113   2.0 Units
Advanced Hairstyling
Prerequisite: Current California State Cosmetology License. Course Advisory: SCC minimum English standard. Designed to provide licensed cosmetologist with advanced techniques in haircutting, hairstyling and make-up. Provides hands-on knowledge of the current trends released by the National Hairdresser's Association. Presents concepts and principles of newly established in the cosmetology industry. NOTE: Students are required to purchase a materials card from the SCC bookstore. The cost of the materials card and start-up materials varies. For current costs, please refer to the Schedule of Classes for each semester. *One hour lecture, three hours lab.*

COSM 114   15.0 Units
Brush-Up and/or Supplemental Training
Prerequisite: Completion of COSM 102 or its equivalent, or current license number or expired California State license number, or a letter from the California State Board of Cosmetology identifying specific requirements of training for cosmetology licensure. Course Advisory: SCC minimum English standard. Designed to meet the needs of cosmetologist who have deficiencies in theory or practice in the field of cosmetology. Assists cosmetologist who require additional training to qualify for better positions by upgrading skills. Preparatory training for cosmetologist who wish to renew their cosmetology license. NOTE: Students are required to purchase a materials card from the SCC bookstore. The cost of the materials card and start-up materials varies. For current costs, please refer to the Schedule of Classes for each semester. *Five hours lecture, thirty hours lab.*

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COSM 115   **13.0 Units**
Cosmetology Instructor Training I
Prerequisite: Current California Cosmetologist's license and completion of COSM 102 or 114. Course Advisory: SCC minimum English standard. Presents cosmetology principles and techniques applied to instruction teaching methods. Designed for currently licensed cosmetologist who want to pursue a cosmetology instructor license through the California State Board of Barbering and Cosmetology. Focus is on the lesson planning, presentation methods, application techniques, evaluation processes and instruction materials. Provides the utilization of cosmetology processes to develop instruction performance criteria. State Board of Barbering and Cosmetology requires one experience within the last three years and completion of COSM 102 or 114 within the last five years to be eligible for instructors licensing test. NOTE: Students are required to purchase a materials card from the SCC bookstore. The cost of the materials card and start-up materials varies. For current costs, please refer to the Schedule of Classes for each semester. *Five hours lecture, twenty-four hours lab.*

COSM 116   **8.0 Units**
Cosmetology Instructor Training II
Prerequisite: COSM 115. Course Advisory: SCC minimum English standard. Continuation of Cosmetology 115 to give the student more sophistication in the development, implementation and evaluation of teaching methods. Focus is on laboratory practicum emphasizing curriculum activities utilizing lesson planning and teaching techniques. Provide the students with the opportunity to synthesize and utilize instructional knowledge and skills through classroom instruction presentations. Designed to prepare the student for the cosmetology instructor licensure examination for the California State Board of Barbering and Cosmetology. NOTE: Students are required to purchase a materials card from the SCC bookstore. The cost of the materials card and start-up materials varies. For current costs, please refer to the Schedule of Classes for each semester. *Five hours lecture, fifteen hours activities.*

COSM 117   **15.0 Units**
Special Manicurist
Course Advisory: SCC minimum English standard. Consists of four hundred (400) hours of intensive training and study. Designed to prepare the student for the California State Board Examination in Manicuring. Focus is on the essential knowledge and skills in all area of manicuring technology. Provide the opportunity for students to develop technical skills in providing nail care and artificial nail service to multiple clients in the patron laboratory. NOTE: Students are required to purchase an equipment kit and materials card from the SCC Bookstore. The cost of the materials card and start-up materials varies. For current costs, please refer to the Schedule of Classes for each semester. Students are required to attend the mandatory Cosmetology information session (see information session statement in Schedule of Classes). Students must have completed the designated hours of practical training and technical instruction, the tenth (10th) grade, or its equivalent, and be 18 years of age to qualify for the manicurist license examination by the State Board of Barbering and Cosmetology. NOTE: Not open to students who have completed COSM 171, 172, 173, or 174. *Five hours lecture, thirty hours lab.*

COSM 175   **6.0 Units**
Cosmetology Education Practicum
Prerequisite: A minimum grade of C in COSM 100, or 101, or 102, or 104A, or 104B, or 115, or 117. Course Advisory: SCC minimum English standard. Provides the application of theoretical skills to increase performance proficiencies and accrue the hours as mandated by the State Board of Barbering and Cosmetology. All students enrolling in COSM 175 must pay a Material's Fee with enrollment fees to the Admissions and Records office at the time of registration. The cost of the materials fee and start-up materials varies. *Five hours lecture, twenty-one hours lab (8-week course).*

Counseling

Program Description

These courses are designed to assist students in making successful adjustment to college, develop academic and career plans and goals, acquire learning skills, obtain job-seeking skills and employment, and develop interpersonal skills for life and work.

Associate Degree

Not offered in this discipline.

COUN 007   **3.0 Units**
College Study Techniques

Course Advisory: Eligibility for English 001 and SCC minimum Math standard. This course provides an exploration of the intellectual, psychological, physiological and sociological factors that impact lifelong learning, well-being and success. Topics include: value of education and student responsibility; psychology of student attitudes, motivation, behaviors and self efficacy; critical thinking and effective study strategies; health issues and lifestyle choices; relying on others in a diverse world; effective written and oral communication; time management, campus and community resources; transfer and educational planning. Students will be required to purchase a current Solano College catalog. *Three hours lecture.*

COUN 050   **3.0 Units**
Career—Life Planning

Course Advisory: Eligibility for English 001 and SCC minimum Math standard. This course is designed to help students demonstrate an understanding and appreciation of the impact and significance of career choices on the social, psychological and physiological experiences throughout the life span. This course is also designed to help students identify their interests, skills, values and personality traits (self-assessment profile), conduct career research and exploration, and learn current job seeking skills. Students will analyze the relationship between themselves, their life choices and the ongoing process of career planning and self-development throughout the life span. *Three hours lecture.*

COUN 055   **3.0 Units**
Valuing Diversity

Course Advisory: Eligibility for English 001 and SCC minimum Math standard. An examination of the complexities of interpersonal relationships among several cultures in our society including self-concept, values, beliefs, communication and lifestyle. This course will invite exploration of individual cultural perception in order to promote respect for differences and to develop a sense of community. Examination requirements include written essays and critical papers. *Three hours lecture.*

COUN 058   **3.0 Units**
Life Management

Course Advisory: SCC minimum English standard. A survey of the areas of life which influence decision-making. Students are introduced to areas of human development (emotional, intellectual, physical, and social) which influence decision making. They will analyze and evaluate differences in values, motivation, and goals. Includes introduction to financial, time and stress management, and communication skills. Requires written papers and problem-solving exercises. *Three hours lecture.*

COUN 062   **3.0 Units**
Helping Skills: Creating Alliances & Facilitating Change

Course Advisory: COUN 083, Eligibility for English 001 and SCC minimum Math standard. An introduction to the basic helping skills that enable the student to build an alliance, effect change and empower others within a multicultural society. A helping model is introduced and helping skills such as attending, active listening, demonstrating empathy, assessment and referral are discussed, role played and applied in an experiential manner to a number of common challenges. In addition, the pertinent legal and ethical guidelines of the professional helping relationship are presented, discussed and applied throughout the course. *Three hours lecture.*

Counseling

COUN 064A   **4.0 Units**
Practicum I
Prerequisite: COUN 062, HS 051, HS 053. Course Advisory: Eligibility for English 001 and SCC minimum Math standard. The first of a two-course sequence in a supervised Human Services practicum experience at an approved agency or educational setting. In order to develop and apply culturally sensitive and ethically sound helping skills, students will work a minimum of 100 hours and participate actively in a two hour weekly seminar. Placement at most sites will involve a criminal background check. *Two hours lecture, six hours by arrangement.*

COUN 064B   **4.0 Units**
Practicum II
Prerequisite: COUN 064A. Course Advisory: HS 055; Eligibility for English 001; SCC minimum Math standard. The second semester of a two course sequence in a supervised Human Services Practicum, required for Human Services majors. Students will further develop culturally and ethically competent helping skills as they continue to work in their approved site or work in a new approved site. Students will continue to hone and apply more advanced and educationally informed helping skills. This additional 100 hours in an approved site and its supporting 2 hour weekly seminar, will meet the Human Services certificate and Associate degree requirement and will help students further clarify their potential for a longer range educational and career parth in Human Services, Social Work or Counseling. Practicum Sites often require students to pass a criminal background check. *Two hours lecture, six hours by arrangement.*

COUN 068   **1.0 Unit**
University Transfer Success
Course Advisory: SCC minimum English and Math standards. This course provides students with a concrete plan for understanding and succeeding in transferring to a four-year college or university. Topics include the following: Major selection; college options; application processes; academic preparation and individual education plans. *Four hours lecture (4-week course).*

COUN 083   **3.0 Units**
Applied Psychology
Course Advisory: Eligibility for English 001. This course is an applied approach to understanding the fundamental concepts of psychology as they relate to daily life. Topics include examining methods of psychology, stages of personality development, personal learning, relationships, values, communication, motivation, emotions, lifestyle, and attitudes. Concepts will be introduced to foster the student's understanding of his/her own personal development and life endeavors. Students will learn problem solving techniques by addressing real life concerns and developing solutions. Theories and applications will be applied across a diversity of settings. *Three hours lecture.*

COUN 088   **1.0 Unit**
Math, Engineering And Science Achievement (MESA) Enrichment
Course Advisory: SCC minimum English and Math standards. This course assists students in acquiring the knowledge and skills necessary to reach their educational goals in mathematics, engineering and science-related fields. Topics to be covered include: strengths assessment; math and science study skills; transfer preparation and career strategies. Students will synthesize and compare and contrast information to draw conclusions on course topics. *One hour lecture.*

COUN 098   **3.0 Units**
Performance Enhancement
Course Advisory: SCC minimum English and Math standards. Performance enhancement explores the psychological, social and physiological factors influencing optimal performance in life's endeavors including academics, performing arts, sports, interpersonal and business relationships. Performance enhancement topics include self care, life balance, confidence, arousal management, motivation, goal attainment, concentration, positive self talk, commitment, uses of imagery and visualization, active listening and demonstrating empathy. Students will design and apply their own Personal Performance Plan to a variety of performance arenas. *Three hours lecture.*

Counseling

COUN 101   **0.5 Unit**
Orientation For College Success
Course Advisory: Completion of Solano Assessment testing and possession of all relevant academic records and other test results and transcripts, including SAT, ACT, AP and IB and SCC minimum English and Math standards. This short-term course provides an in-depth orientation to college and the required initial student education plan. It seeks to maximize the new student's successful experience by introducing Solano College's student support services, certificate, associate degree and transfer preparation requirements, and the essential personal motivators for college success. Students will provide their academic records e.g. high school and college transcripts, assessments and tests such as SAT/ACT/AP/IB which will assist them in creation of the initial education plan. *Two hours lecture (1-week course).*

COUN 102A   **0.5 Unit**
Time Management & Goal Setting
Course Advisory: SCC minimum English and Math standards. This course introduces goal setting and time management techniques such as analyzing time usage, prioritizing and developing a schedule to assist students to achieve their educational and career goals. Other COUN 102 courses may be taken concurrently. NOTE: Not open for credit to students who have completed COUN 007 with a minimum grade of C. *Four hours lecture (2-week course).*

COUN 102B   **0.5 Unit**
Test Taking, Test Anxiety & Memory
Course Advisory: SCC minimum English and Math standards. This course introduces test taking, test anxiety and memory concepts and techniques to assist students to achieve their educational and career goals. Other COUN 102 courses may be taken concurrently. Note: Not open for credit to students who have completed COUN 007 with a minimum grade of C. *Four hours lecture (2-week course).*

COUN 102C   **0.5 Unit**
Study Systems
Course Advisory: SCC minimum English and Math standards. This course introduces note-taking, reading and study environment concepts/strategies and identifies attitudes and learning styles to assist students to achieve their educational and career goals. Other COUN 102 courses may be taken concurrently. Note: Not open for credit to students who have completed COUN 007 with a minimum grade of C. *Four hours lecture (2-week course).*

Tutoring

TUTR 050   **0.5 Unit**
Tutoring Practicum
Prerequisite: Completion with a minimum grade of B in the subject to tutor, instructor recommendation, permission of Tutoring Center personnel after verification of prerequisites, and concurrent assignment as a Tutoring Center or in-class tutor. Provides supervised practice in tutoring, examines the basics of learning principles, communication, listening skills, effective tutoring techniques and is required for all students who work or volunteer in the Tutoring Center. *Eight hours lecture (1-week course).*

TUTR 500   **Non-Credit**
Supervised Tutoring
Prerequisite: Recommendation by the course instructor or a counselor, permission of the Tutoring Center Supervisor to verify prerequisite, and concurrent enrollment in course or courses in which tutoring assistance is being requested. Provides academic support through content reinforcement and course-related materials. Peer tutors are assigned to individuals or small groups; the tutoring will take place in the Tutoring Center and the tutoring sessions are supervised by a credentialed instructor. This is an Open Entry/Open Exit course.

Criminal Justice

Criminal Justice, Computer Forensics

Program Description
This program is designed to prepare the student for employment as a computer forensics investigator. It includes a mix of several disciplines of study that, when combined, provide a basis for the general knowledge and skills required to perform the careful investigation of evidence obtained from computers and computer systems. In addition, this major provides the knowledge and skills required by computer network specialists involved in the tasks of securing computer systems and protecting information workers.

Certificate of Achievement and Associate in Science Degree
The Certificate of Achievement can be obtained upon completion of the 32.5-unit major listed below. The Associate Degree can be obtained upon completion of 60 units, including the major, general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Criminal Justice, Computer Forensics Certificate of Achievement/Associate Degree will be able to:
1. Perform complex operation and management of computer-based software systems.
2. Setup and maintain computer-based hardware systems.
3. Perform a computer investigation.
4. Understand the legal principles and practices of computer investigations.

REQUIRED COURSES . . . . **Units**
CJ 051 Criminal Investigation. 3
CJ 053 Legal Aspects of Evidence 3
CIS 001 Introduction to Computer Science. 3
CIS 162 A+ Computer Hardware Technology 4
CIS 164 A+ Computer Operating Systems Technology . . 4
CIS 166 Computer Network + Technology. 4
CIS 168 Computer Security + Technology 4
CIS 172 Computer Forensics: Evidence Recovery 1.5
CIS 173 Computer Forensics Investigations. 3
CIS 174 Computer Forensics:
         Operating Systems Internals 3
   Total Units **32.5**

Recommended Electives
CIS 022 Introduction to Programming
CIS 052 UNIX Operating System
         (UNIX OPERATING SYST)
CIS 055 MS Windows Operating Systems
CIS 073 Microsoft Excel ENGL 004 Critical Thinking and
Composition: Language in Context
ENGL 051 Technical Writing
OCED 070 Occupational Soft Skills
OCED 090 Occupational Work Experience
OCED 091 General Work Experience
OT 054A Beginning Keyboarding A
OT 054B Beginning Keyboarding B
OT 055A Intermediate Keyboarding/Word Processing A
OT 055B Intermediate Keyboarding/Word Processing B
SOCS 022 Ethnic, Racial and Minority Group Relations in
Harmony and Conflict
SPAN 001 First Semester Spanish
SPAN 002 Second Semester Spanish

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Computer Forensics."

Criminal Justice

Criminal Justice, Corrections

Program Description
This program offers core and selective courses which provide the student with a base of knowledge and proficiencies in the area of corrections. The program operates with the cooperation and participation of local corrections agencies. All instructors in the program have experience in the corrections field. Courses are scheduled both day and evening to accommodate full-time or part-time students seeking to acquire or upgrade skills in the corrections field.

Certificate of Achievement and Associate in Science Degree
The Certificate of Achievement can be obtained upon completion of the 30-unit major listed below. The Associate in Science Degree can be obtained upon completion of 60 units, including the major, general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Criminal Justice, Corrections Certificate of Achievement/Associate Degree will be able to:
1. Demonstrate an understanding of the American Criminal Justice system and the scope of responsibilities of the various local, state, and federal law enforcement agencies beginning with arrest through parole.
2. Articulate the system's objectives, the crime problem, and role expectations of criminal justice personnel, and describe the various agencies and each subsystem within the system.
3. Describe the system's responsibilities to the community, factors in crime causation, the social implications of crime and communication barriers between the system and the community.
4. Articulate the differences between the major criminological theories of the causes of crime and how those theories relate to policies toward crime and criminal behavior.
5. Analyze legal concepts and make rational decisions about case processing. Demonstrate knowledge of the rules of evidence, legal definitions, and concepts of evidentiary law. Apply basic investigative proficiencies.
6. Demonstrate critical thinking and analytical skills acquired in the social sciences in preparation for continuance of college-level education.

REQUIRED COURSES . . . . **Units**
CJ 001 Introduction to Criminal Justice. 3
CJ 002 Concepts of Criminal Law 3
CJ 011 Community Relations 3
CJ 051 Criminal Investigation. 3
CJ 052 Investigative Report Writing 3
CJ 053 Legal Aspects of Evidence 3
CJ 058 Fundamentals of Crime and Delinquency 3
CJ 059 Interviewing and Counseling. 3
Select six units from the elective list below 6
    Total Units 30

Select six (6) units from the following . . . . **Units**
CJ 057 Criminal Justice Career Development. 3
CJ 060 Probation and Parole 3
CJ 062 Legal Aspects of Correction 3
CJ 091 Vocational Work Experience – Corrections . . . . 1 - 3

Recommended Electives
CIS 050 Microcomputer Applications
COMM 010 Interpersonal Communication
COUN 062 Helping Skills: Creating Alliances
       & Facilitating Change
ENGL 004 Critical Thinking and Composition: Language
       in Context
ENGL 051 Technical Writing
HUMN 003 Journey in a Multicultural Landscape
HS 051 Introduction to Human Services
HS 053 Serving Special Populations
OCED 070 Occupational Soft Skills
OCED 090 Occupational Work Experience
OCED 091 General Work Experience
OT 054A Beginning Keyboarding A
OT 054B Beginning Keyboarding B
OT 055A Intermediate Keyboarding/Word Processing A
OT 055B Intermediate Keyboarding/Word Processing B
SOCS 022 Ethnic, Racial and Minority Group Relations in
       Harmony and Conflict
SOCS 030 Peace, Non Violence and Conflict Resolution
SPAN 001 First Semester Spanish
SPAN 002 Second Semester Spanish

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Criminal Justice: Corrections."

Criminal Justice

Criminal Justice, Law Enforcement

Program Description
This program was established with the cooperation of the Solano County Criminal Justice Advisory Committee and offers courses for both pre-service and in-service students. All instructors have experience in law enforcement, and courses are scheduled day or evening to accommodate full-time and part-time students seeking to acquire or upgrade skills in the field.

Certificate of Achievement and Associate in Science Degree
The Certificate of Achievement can be obtained upon completion of the 30-unit major listed below. The Associate in Science Degree can be obtained upon completion of 60 units, including the major, general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Criminal Justice, Law Enforcement Certificate of Achievement/Associate Degree will be able to:
1. Demonstrate an understanding of the American Criminal Justice system and the scope of responsibilities of the various local, state, and federal law enforcement agencies beginning with arrest through parole.
2. Articulate the system's objectives, the crime problem, and role expectations of criminal justice personnel, and describe the various agencies and each subsystem within the system.
3. Describe the system's responsibilities to the community, factors in crime causation, the social implications of crime and communication barriers between the system and the community.
4. Articulate the differences between the major criminological theories of the causes of crime and how those theories relate to policies toward crime and criminal behavior.
5. Analyze legal concepts and make rational decisions about case processing. Demonstrate knowledge of the rules of evidence, legal definitions, and concepts of evidentiary law. Apply basic investigative proficiencies.
6. Demonstrate critical thinking and analytical skills acquired in the social sciences in preparation for continuance of college-level education

REQUIRED COURSES . . . . **Units**
CJ 001 Introduction to Criminal Justice. 3
CJ 002 Concepts of Criminal Law 3
CJ 011 Community Relations 3
CJ 051 Criminal Investigation. 3
CJ 052 Investigative Report Writing 3
CJ 053 Legal Aspects of Evidence 3
CJ 058 Fundamentals of Crime and Delinquency 3
CJ 059 Interviewing and Counseling. 3
Select six units from the elective list below 6
   Total Units 30

Select six (6) units from the following . . . . **Units**
CJ 056 Juvenile Procedures 3
CJ 057 Criminal Justice Career Development. 3
CJ 064 Principles and Procedures of
      the Criminal Justice System 3
CJ 090 Vocational Work Experience -
      Law Enforcement . . . . 1 - 3

Recommended Electives
CIS 050 Microcomputer Applications
ENGL 004 Critical Thinking and Composition:
          Language in Context
ENGL 051 Technical Writing
OCED 070 Occupational Soft Skills
OCED 090 Occupational Work Experience
OCED 091 General Work Experience
OT 054A Beginning Keyboarding A
OT 054B Beginning Keyboarding B
OT 055A Intermediate Keyboarding/Word Processing A
OT 055B Intermediate Keyboarding/Word Processing B
SOCS 022 Ethnic, Racial and Minority Group Relations
         in Harmony and Conflict
SPAN 001 First Semester Spanish
SPAN 002 Second Semester Spanish

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Criminal Justice: Law Enforcement."

Criminal Justice

Associate in Science in Administration of Justice for Transfer (ADT: A.S.-T)

Program Description
This program offers core and selective courses which provide the student with a base of knowledge and proficiencies in the area of criminal justice. The program operates with the cooperation and participation of local criminal justice agencies. All instructors in the program have experience in the criminal justice field. Courses are scheduled both day and evening to accommodate full-time or part-time students seeking to acquire or upgrade skills and to prepare the criminal justice student for a four-year degree in the CSU system.

Associate in Science in Criminal Justice for Transfer
The Associate in Science in Criminal Justice for Transfer degree is designed for students who plan to complete a bachelor's degree in Criminal Justice at a CSU campus. Students completing an Associate in Science in Criminal Justice for Transfer degree are guaranteed admission to the CSU system, but not to a particular campus or major. Students transferring to a CSU campus that accepts the Associate in Science in Criminal Justice will be required to complete no more than 60 units after transfer to earn a bachelor's degree. The Associate in Science in Criminal Justice for Transfer degree also provides students with the learning experience on how to preserve and maintain social order by gaining critical skills in these key areas: law enforcement; corrections, probation, and parole; juvenile justice, delinquency, and juvenile corrections; criminology theory and crime control; and criminal justice leadership and administration. With this transfer degree, students will gain an understanding of both adult and juvenile justice systems, as well as the skills to apply innovative programmatic efforts. From due process to constitutional protections to the importance of case law in American criminal justice, the student will be exposed to the specific legal and ethical challenges for each branch of the U.S. criminal justice system.

To earn the Associate in Science in Administration of Justice for Transfer, students must:
1. Complete 60 semester units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements
   b. A minimum of 18 semester units in a major or area of emphasis, as determined by the community college district..
2. Obtain a minimum grade point average of 2.0.

ADTs also require that students must earn a C or better in all courses required for the major or area of emphasis.
A "P" (Pass) grade is not an acceptable grade for courses in the major.

Program Outcomes
Students who complete the Associate in Science in Administration of Justice for Transfer will be able to:
1. Demonstrate an understanding of the American Criminal Justice system and the scope of responsibilities of the various local, state, and federal law enforcement agencies beginning with arrest through parole.
2. Articulate the system's objectives, the crime problem, and role expectations of criminal justice personnel, and describe the various agencies and each subsystem within the system.
3. Describe the system's responsibilities to the community, factors in crime causation, the social implications of crime and communication barriers between the system and the community.
4. Articulate the differences between the major criminological theories of the causes of crime and how those theories relate to policies toward crime and criminal behavior.
5. Analyze legal concepts and make rational decisions about case processing.
6. Demonstrate knowledge of the rules of evidence, legal definitions, and concepts of evidentiary law. Apply basic investigative proficiencies.
7. Demonstrate critical thinking and analytical skills acquired in the social sciences in preparation for continuance of college-level education at a four year college.

Criminal Justice

REQUIRED COURSES . . . . **Units**
CJ 001 Introduction to Criminal Justice. 3
CJ 002 Concepts of Criminal Law 3
Select Two Courses from List A 6
Select Two Courses from List B 6

List A (Select 2 courses) . . . . **Units**
CJ 011 Community Relations 3
CJ 053 Legal Aspects of Evidence 3
CJ 051 Criminal Investigation. 3
CJ 056 Juvenile Procedures 3

List B (Select 2 courses) . . . . **Units**
SOC 001 Introduction to Sociology 3
PSYC 001 Introduction to Psychology. 3
CJ 064 Principles and Procedures of the
    Criminal Justice System 3
    Total Units **18**

Required Major Total Units. **18**
CSU General Education or IGETC Pattern Units . **37 - 39**
CSU Transferable Electives (as needed to reach
    60 transferable units)* . . . . **5 - 12**
Total Degree Units. **60**

* 0 - 9 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.

CJ 001   3.0 Units
Introduction to Criminal Justice
Course Advisory: Successful completion of English 001 (minimum grade of C). Introduction to Criminal Justice. This course introduces students to the characteristics of the criminal justice system in the United States. Focus is placed on examining crime measurement, theoretical explanations of crime, responses to crime, components of the system, and current challenges to the system. The course examines the evolution of the principles and approaches utilized by the justice system and the evolving forces which have shaped those principals and approaches. Although justice structure and process is examined in a cross cultural context, emphasis is placed on the US justice system, particularly the structure and function of US police, courts, and corrections. Students are introduced to the origins and development of criminal law, legal process, and sentencing and incarceration policies. C-ID AJ 110. *Three hours lecture.*

CJ 002   3.0 Units
Concepts of Criminal Law
Course Advisory: Successful completion of English 001 (minimum grade of C). A study of the history, philosophy and development of law and various legal systems; case law and legal research; corpus delicti, mental elements, capacity to commit crimes, and defenses; classification of crimes and penalties; elements of major crimes. C-ID AJ 120. *Three hours lecture.*

CJ 011   3.0 Units
Community Relations
Course Advisory: SCC minimum English and Math standards. This course examines the complex, dynamic relationship between the justice system and the community in addressing crime and conflict. The emphasis is on the challenges and prospects of administering justice within a diverse multicultural population. Topics covered may include crime prevention, restorative justice, conflict resolution and ethics. C-ID AJ 160. *Three hours lecture.*

CJ 051   3.0 Units
Criminal Investigations
Course Advisory: CJ 001; SCC minimum English and Math standards. Fundamentals of investigation, crime scene search and recording, collection and preservation of evidence, scientific aid; interviews and interrogation, follow-up and case preparation. C-ID AJ 140. *Three hours lecture.*

CJ 052   3.0 Units
Investigative Report Writing
Course Advisory: CJ 001; CJ 002; CJ 051; Eligibility for English 001. Presents investigative report writing in criminal justice relative to police, probation, institutional and parole activities. Includes practical experience in preparing field notes, statements, and reports. *Three hours lecture.*

Criminal Justice

CJ 053   **3.0 Units**
Legal Aspects of Evidence
Course Advisory: CJ 001; SCC minimum English and Math standards. A study of the origin, development, philosophy and constitutional basics of evidence; constitutional and procedural considerations affecting arrest, search and seizure; kinds of degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies. C-ID AJ 124. *Three hours lecture.*

CJ 056   **3.0 Units**
Juvenile Procedures
Course Advisory: Eligibility for English 001. Presents the organization, function, and jurisdiction of juvenile agencies; the processing and detention of juveniles; juvenile case disposition; juvenile statutes and court procedures. C-ID AJ 220. *Three hours lecture.*

CJ 057   **3.0 Units**
Criminal Justice Career Development
Course Advisory: CJ 001; SCC minimum English and Math standards. Examines criminal justice career positions, employment standards and current occupational opportunities in the field. Includes practical aspects of various jobs and provides information and practice in entrance examination taking, oral interviews, and general preparation for various occupations within the criminal justice field. *Three hours lecture.*

CJ 058   **3.0 Units**
Fundamentals of Crime and Delinquency
Course Advisory: CJ 001; SCC minimum English and Math standards. Introduction to major types of criminal behavior, patterns of career offenders, factors which contribute to the production of criminality of delinquency. Includes methods used in dealing with violators in the justice system; the changing roles of police courts and after-care process of sentence, probation, prisons, and parole; changes of the law in crime control and treatment processes. *Three hours lecture.*

CJ 059   **3.0 Units**
Interviewing and Counseling
Course Advisory: CJ 001; SCC minimum English and Math standards. Overview of the interviewing and counseling techniques available to practitioners in law enforcement, the courts, and corrections emphasizing communication and practical skills. *Three hours lecture.*

CJ 060   **3.0 Units**
Probation and Parole
Course Advisory: CJ 001; CJ 058; SCC minimum English and Math standards. Presents the philosophy and history of correctional services. A survey of the correctional sub-systems of institutions by type and function, probation concepts and parole operations. A discussion of correctional employee responsibilities as applied to offender behavior modifications through supervisory control techniques. Covers rehabilitation goals as they affect individual and intimate cultural groups in both confined and field settings. *Three hours lecture.*

CJ 062   **3.0 Units**
Legal Aspects of Correction
Course Advisory: CJ 058; SCC minimum English and Math standards. Presents the legal aspects of corrections and code provisions relative to all phases of the correctional system. *Three hours lecture.*

CJ 064   **3.0 Units**
Principles and Procedures of the Criminal Justice System
Course Advisory: CJ 001; SCC minimum English and Math standards. Detailed study of the role and responsibility of each sub-system within the criminal justice system; an examination of the philosophy, history, structure, operation and interrelation of each sub-system component; a description of procedure from initial entry of the individual into the system to the final disposition. *Three hours lecture.*

CJ 090   **1.0 to 3.0 Units**
Vocational Work Experience: Law Enforcement
Course Advisory: CJ 001. Volunteer service in a variety of governmental and private criminal justice agencies related to Law Enforcement. One unit of credit may be earned for each 75 hours paid or 60 hours unpaid work per semester to a maximum of 3 units per semester. Students who enroll in CJ090 may not enroll in CJ 091 during the same semester. Students may take this course up to the maximum number of units over multiple semesters. This is a Credit/No Credit only course. NOTE: Combined units for all work experience courses shall not exceed 12. One hour lecture and five to twenty hours by arrangement. *To determine the correct number of units in which to enroll, refer to the following formula for paid employment*: Full Semester Sections: 1 unit = 5 hours per week 2 units = 10 hours per week 3 units = 15 hours per week *unpaid work requires fewer hours per week.*

Criminal Justice

CJ   091   1.0 to 3.0 Units
Vocational Work Experience: Corrections

Course Advisory: CJ 001. Volunteer service in a variety of governmental and private criminal justice agencies related to Corrections. One unit of credit may be earned for each 75 hours paid or 60 hours unpaid work per semester to a maximum of 3 units per semester. Students enrolled in CJ 091 may not enroll in CJ 090 during the same semester. Students may take this course up to the maximum number of units over multiple semesters. This is a Credit/No Credit only course. NOTE: Combined units for all work experience courses shall not exceed 12. One hour lecture and five to twenty hours by arrangement. *To determine the correct number of units in which to enroll, refer to the following formula for paid employment*: Full Semester Sections: 1 unit = 5 hours per week 2 units = 10 hours per week 3 units = 15 hours per week *unpaid work requires fewer hours per week.*

Drafting

Drafting and Design Technician

Program Description
This program is designed to provide students with entry level skills in the fields of mechanical, electrical, civil and architectural drafting and/or design.

Certificate of Achievement and Associate in Science Degree
A Certificate of Achievement can be obtained upon completion of the 30-unit major listed below The Associate in Science Degree can be obtained by completing a total of 60 units, including the major, general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Drafting and Design Technician Certificate of Achievement/Associate Degree will be able to:
1. Demonstrate proficiency at reading, drawing and dimensioning industry standard drawings in the fields of Mechanical, Civil, Architectural, and Electronic drafting and design.
2. Demonstrate proficiency using industry standard computer aided drafting/design CADD software programs.

REQUIRED COURSES . . . . **Units**
DRFT 045 Introduction to
        Computer-Aided Drafting (CAD) 3
DRFT 046 Advanced CAD 3
DRFT 055 Mechanical Drafting - Level I. 3
DRFT 058 Solid Modeling with Solidworks. 3
DRFT 060 Architectural Drafting I. 3
DRFT 075 Electronic Drafting. 3
DRFT 080 Civil Drafting I 3
DRFT 125 Solid Modeling with Solidworks. 3
IT 140 Industrial Materials 3
IT 151 Vocational Mathematics. 3
Select 3 units from Recommended Electives 3
    Total Units 30

Recommended Electives (select 3 units)   **Units**
ART 014 Introduction to Drawing . . . . 2 – 3.5
DRFT 050 Basic Drafting 1.5
DRFT 057 Mechanical Drafting - Level II 3
DRFT 065 Architectural Drafting II 3
DRFT 079 Blueprint Reading 3
DRFT 085 Civil Drafting II 3
DRFT 092 Special Problems. . . . . 1 - 3
DRFT 130 Advanced Printed Circuit Board Design 3
DRFT 140 Surveying 3
ENGR 001 Introduction to Engineering 1
HORT 030 Landscape Design I 3
OCED 070 Occupational Soft Skills 1.5
OCED 071 Occupational Soft Skills 1,5
OCED 090 Occupational Work Experience . . . . 1 - 8
OCED 091 General Work Experience. . . . . 1 - 6

NOTE: Many of the advanced courses will require CAD. It is important to take DRFT 045 (Intro. to CAD) as early in your program as possible. College credit may be obtained with credit by examination in DRFT 045, 050, and 060 or they may be waived.

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Drafting Technician."

Drafting

Survey and Civil Drafting Technician

Program Description
This program is designed to provide students with entry-level skills in the fields of Surveying Technician, Civil Drafting Technician, and/or mapping technician.

Certificate of Achievement and Associate Degree
A Certificate of Achievement can be obtained upon completion of 27 core requirement units. An Associate in Science degree may be obtained by completing 60 units, including the required courses in the major, the general education requirements, and electives. All courses for this major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Survey and Civil Drafting Technician Certificate of Achievement/Associate Degree will be able to:
1. Demonstrate proficiency using industry standard computer aided drafting/design CAD (AutoCAD) software program.
2. Demonstrate proficiency at reading, drawing and dimensioning industry standard civil drawings.
3. Demonstrate basic understanding in using industry standard survey equipment including Transit, Theodolite, and Level.

REQUIRED COURSES . . . . **Units**
DRFT 045 Introduction to
       Computer-Aided Drafting (CAD) 3
DRFT 046 Advanced CAD 3
DRFT 060 Architectural Drafting I 3
DRFT 080 Civil Drafting I 3
DRFT 085 Civil Drafting II 3
DRFT 140 Surveying 3
GEOL 010 Introduction to
       Geographic Information Systems 3
OR
GEOG 010 Introduction to Geographic
       Information Systems 3
IT 151 Vocational Mathematics 3
Select 3 units from Recommended Electives 3
Total Units 27

Recommended Electives (Select 3 units) . . . . **Units**
DRFT 050 Basic Drafting 1.5
DRFT 065 Architectural Drafting II 3
DRFT 079 Blueprint Reading 3
DRFT 092 Special Problems . . . . 1 – 3
ENGR 001 Introduction to Engineering 1
GEOL 001 Physical Geology 3
GEOL 002 Geology Laboratory 1
GEOL 005 Geology of California 3
IT 050 Alternative Energy Technologies 3
OCED 070 Occupational Soft Skills 1.5
OCED 071 Occupational Portfolio Development 1.5
OCED 090 Occupational Work Experience . . . . 1 – 8
OCED 091 Occupational Work Experience . . . . 1 – 6

*Course advisory for all courses: Solano Community College minimum English and Math Standards.

This is a Gainful Employment Program. For additional information, please visit
http://www.solano.edu/gainful_employment/ and select "Survey Technician / Civil Drafting Technician."

Drafting

Computer Aided Drafting (CAD) Technician Job-Direct Certificate

Program Description
The required courses must be completed with a grade of "C" or better.

Program Outcomes
Students who complete the Job Direct Certificate will be able to:
1. Demonstrate proficiency and a basic understanding of engineering drawings and drawing techniques
2. Demonstrate proficiency and have the ability to make minor to moderate changes (such as ECO's or Engineering Change Orders). Demonstrate proficiency to draw simple objects in AutoCAD and Solidworks. Students will be quizzed and tests on their ability to create and edit using the appropriate software.

REQUIRED COURSES . . . . **Units**
DRFT 045 Introduction to
Computer-Aided Drafting (CAD) 3
DRFT 046 Advanced Computer Aided
Drafting (CAD) 3
DRFT 125 Solid Modeling with Solidworks 3
DRFT 079 Blueprint Reading 3
   Total Units 12

Drafting

DRFT   045   **3.0 Units**
Introduction to Computer-Aided Drafting (CAD)
Course Advisory: SCC minimum English and Math standards. Designed to introduce the drafting student to CAD (AutoCAD) technology and terminology. The student shall complete a series of related drawing problems using a CAD work station. Fundamentals of creating and modifying engineering and architectural related drawings. *Two hours lecture, three hours lab.*

DRFT   046   **3.0 Units**
Advanced Computer Aided Drafting (CAD)
Prerequisite: DRFT 045 with a minimum grade of C. Course Advisory: SCC minimum English and Math standards. Designed to develop advanced proficiency in CAD. Covers symbol libraries, isometrics, external references (XREFS), 3-D drawing, basic solid modeling, tables and customization techniques. *Two hours lecture, three hours lab.*

DRFT   050   **1.5 Units**
Basic Drafting
Course Advisory: SCC minimum English and Math standards. This course presents the fundamentals of drafting using hand drafting tools—pencil, paper, triangles, scales, compass, etc. Students will use traditional methods of construction for polygons, orthographic views, pictorial drawings, simple architectural floor plans and other technical drafting constructions and will be giving hands on training in technical sketching. This course is intended to give additional training in visualization and object manipulation without the aid of a computer and is a recommended elective for drafting students, or for non-drafting students (in fields such as welding, mechatronics, engineering, etc) who may need to create technical drawings without a computer. *One-half hour lecture, three hours lab.*

DRFT   055   **3.0 Units**
Mechanical Drafting Level I
Prerequisite: DRFT 045 with a minimum grade of C. Course Advisory: SCC minimum English and Math standards. This course teaches techniques and standards of mechanical drafting. Main topics include orthographic drawings, sections, pictorials, threads, fasteners, basic tolerance concepts, ANSI standards and working drawings. Basic mechanical design principles, with a special emphasis on electro-mechanical packaging, are introduced. *Two hours lecture, three hours lab.*

DRFT   057   **3.0 Units**
Mechanical Drafting Level II
Prerequisite: DRFT 055 with a minimum grade of C. Course Advisory: IT 151 (may be taken concurrently); SCC minimum English and Math standards. A continuation of Drafting 55, with special emphasis on advanced electro-mechanical packaging and design, Geometric Dimension and Tolerancing (GD&T) terminology and drawing standards, gears, and advanced working drawings. Students will create designs using electronic components (Printed Circuit Boards, connectors, LEDs, etc) and 3D printed models. *Two hours lecture, three hours lab.*

DRFT   058   **3.0 Units**
Solid Modeling with Solidworks
Course Advisory: SCC minimum English standards; knowledge of drafting concepts. This course is designed to teach the basic concepts and skills necessary to create, view, and manipulate objects and engineering drawings in three dimensional space using Solidworks software. Student will create models in 3D printer, output support documentation and drawings, and incorporate design process concepts in designs. *Two hours lecture, three hours lab.*

DRFT   060   **3.0 Units**
Architectural Drafting I
Prerequisite: DRFT 045 with a minimum grade of C. Course Advisory: SCC minimum English and Math standards. Covers basic methods and practices of architectural drafting and design. Students will design a complete set of plans for a single family dwelling in accordance with local building regulations. Course includes an introduction to the Title 24 energy requirements and standards. Recommended for non-majors and drafting majors. *Two hours lecture, three hours lab.*

DRFT   065   **3.0 Units**
Architectural Drafting II
Prerequisite: DRFT 060 with a minimum grade of C. Course Advisory: IT 151 (may be taken concurrently); SCC minimum English and Math standards. A continuation of Drafting 60 with special emphasis multiple story residential design. Students will create an industry standard, two-story house design on a 12-14 sheet plan set. This course also exposes students to famous architects, past and present. *Two hours lecture, three hours lab.*

Drafting

DRFT 075   **3.0 Units**
Electronic Drafting
Prerequisite: DRFT 045 with a minimum grade of C. Course Advisory: SCC minimum English and Math standards. Designed for drafters to develop skill in reading and drawing plans related to electronics. Topics include, terminology, component identification, schematic symbols, cable drawings, electro-mechanical design from the electronic perspective. Special emphasis is placed on basic printed circuit board design. Students will design through-hole and surface mount printed circuit boards. *Two hours lecture, three hours lab.*

DRFT 079   **3.0 Units**
Blueprint Reading
Course Advisory: SCC minimum English and Math standards. Designed to provide an understanding and interpretation of a variety of blueprints. Emphasizes the ability to recognize and identify features of mechanical blueprints and architectural blueprints. Also includes basic development of freehand sketching abilities. *Two and one-half hours lecture, one and one-half hours lab.*

DRFT 080   **3.0 Units**
Civil Drafting I
Prerequisite: DRFT 045 with a minimum grade of C. Course Advisory: IT 151 with a minimum grade of C. SCC minimum English and Math standards. An introductory course in civil drawing with emphasis on land division, breakdown of survey notes, office procedures and related math computations. Includes instruction in a variety of industry standard maps, including subdivision maps, assessors parcel maps and topographic maps. *Two hours lecture, three hours lab.*

DRFT 085   **3.0 Units**
Civil Drafting II
Prerequisite: DRFT 080 with a minimum grade of C. Course Advisory: IT 151 with a minimum grade of C; SCC minimum English and Math standards. Designed for the advanced civil drafting student with emphasis on computer programs and experience compatible with the industry standards. Includes the study of plan and profile, cross-section and earthwork calculations. *Two hours lecture, three hours lab.*

DRFT 092   **1.0 to 3.0 Units**
Special Problems
Prerequisite: DRFT 050. Individualized projects for advanced students who demonstrate competency to carry out individual work. Students may take this course up to the maximum number of units over multiple semesters. *Three to nine hours by arrangement.*

DRFT 130   **3.0 Units**
Electronic Drafting With CAD
Prerequisite: DRFT 075 with a minimum grade of C. Course Advisory: SCC minimum English and Math standards. The student will learn how to design complex circuit boards from schematic layout to artwork generation. Course requires completion of a complete set of drawings for a printed circuit board, including proper documentation, all based on industry standards. Through-hole and surface mount technology are studied. *Two hours lecture, three hours lab.*

DRFT 140   **3.0 Units**
Surveying
Prerequisite: DRFT 080 with a minimum grade of C. Course Advisory: IT 151 with a minimum grade of C; SCC minimum English and Math standards. Presents the principles and practices of surveying. Topics include measurement of directions, distances and elevations. Students will learn the use and care of electronic survey equipment, transits, tapes and levels and be introduced to topics that include transverse calculations, horizontal and vertical curves, measuring standards and mapping. *Two hours lecture, three hours lab.*

Economics

For Early Childhood Education, see Child Development and Family Studies.

Program Description
Economics is the study of how people make choices when faced with scarcity. It is therefore the study of the process of decision-making by individuals, business, governments, or any other group that must make such choices, and the study of the institutional context in which these decisions are made.

Associate Degree
Not offered in this discipline

ECON   001   3.0 Units
Principles Of Economics (Macroeconomics)
Prerequisite: MATH 330 with a minimum grade of C. Course Advisory: Eligibility for ENGL 001. An introductory course focusing on aggregate economic analysis. Topics include: market systems, aggregate measures of economic activity, macroeconomic equilibrium, money and financial institutions, monetary and fiscal policy, international economics, and economic growth. Online work may be required. C-ID ECON 202. *Three hours lecture.*

ECON   002   3.0 Units
Principles Of Economics (Microeconomics)
Prerequisite: MATH 330 with a minimum grade of C. Course Advisory: Eligibility for ENGL 001. This is an introductory course focusing on choices of individual economic decision-makers. Topics include scarcity, specialization and trade, market equilibrium, elasticity, production and cost theory, market structures, factor markets, and market failure. Online work may be required. C-ID ECON 201. *Three hours lecture.*

ECON   010   3.0 Units
Global Economics
Course Advisory: Eligibility for English 001 and SCC minimum Math standard. This is an introductory course that examines patterns of international trade and development. In this course students will understand how economies around the world are linked. Students will examine issues of global trade, trade policies, exchange rate systems, developing countries and controversies regarding trade policy. Students may be required to complete work online. *Three hours lecture.*

Engineering

Program Description

The field of Engineering deals with the design, production, and testing of new products as well as maintaining and improving existing ones. Engineers are professionals who apply mathematical and scientific principles to solve technical problems.

Associate Degree

Not offered in this discipline.

ENGR   001   **1.0 Unit**
Introduction To Engineering

Course Advisory: Successful completion of English 001 and SCC minimum Math standard. A first, non-technical course for engineering students and students considering majoring in engineering. Introduction to different engineering fields, the campus life of engineering students, schedule guidelines, opportunities in engineering, engineers' roles in society, ethics in engineering, and strategies and approaches required to survive math, science, and engineering courses. Possible field trips. *One hour lecture.*

ENGR   017   **5.0 Units**
Introduction To Electrical Engineering

Prerequisite: MATH 023 with a minimum grade of C (may be taken concurrently), and PHYS 007 with a minimum grade of C. Course Advisory: Eligibility for English 001. Required for engineering majors, the course presents a study of basic circuit analysis techniques including Kirchhoff's laws, mesh-current, node-voltage, Thevenin and Norton equivalent; transient and steady-state responses of passive circuits; sinusoidal steady-state analysis; power calculations; operational amplifier; semiconductor devices. Weekly homework assignments and written tests, including a comprehensive final examination and lab reports, will be used to evaluate student success. *Four hours lecture, three hours lab.*

ENGR   030   **4.0 Units**
Engineering Mechanics: Statics

Prerequisite: A minimum grade of C in both MATH 021, and PHYS 006. Course Advisory: Eligibility for English 001. This course, which is required for engineering majors, presents a study of the principles of statics of particles and rigid bodies as applied to equilibrium problems of two and three-dimensional structures, and the principles of friction, virtual work, and stability of equilibrium. *Four hours lecture.*

ENGR   045   **4.0 Units**
Properties Of Materials

Prerequisite: PHYS 006 with a minimum grade of C and CHEM 001 with a minimum grade of C. Course Advisory: Eligibility for English 001. This required course for engineering majors covers the application of basic principles of physics and chemistry to the structure and properties of engineering materials. Special emphasis is devoted to the relationship between microstructure and the mechanical properties of metals, polymers and ceramics, and the electrical, magnetic, and optical properties of materials. Possible field trips. *Three hours lecture, three hours lab.*

English

English

Program Description

The Associate in Arts Degree in English provides the academic and practical experience for further education in English at a four-year institution or a career in English or further education or careers in fields related to English. By completing this program, students may complete transfer requirements to the CSU system and UC system as well as public and private universities both in and out of California to pursue a Bachelor's Degree in English, English Literature or Creative Writing. A Bachelor's Degree in English may also include various emphases such as creative writing, composition/rhetoric, education, literature, or linguistics. Students who complete the A.A. Degree in English will also satisfy the requirements for the AA-T degree in English. In all cases, students should consult with a counselor for more information on university admission and transfer requirements.

Associate in Arts Degree

Students will take courses in English as well as in related fields required for English majors. The English program teaches writing, critical thinking, reading, and research skills as they apply to the areas of composition, creative writing, and the analysis of literature. Course work in creative writing is presented in sequenced writing workshops and courses in literary publishing. Course work in literature explores primarily British and American writers through genre, survey, figure, and thematic courses. The Associate in Arts Degree in English can be obtained by completing a total of sixty (60) units, including the twenty-five (25) to twenty-six (26) units for the major, general education requirements, and electives. All courses in the major must be completed with a grade of C or better or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes

Students who complete the English Associate Degree will be able to:

1. Demonstrate an ability to compose and communicate using appropriate rhetorical patterns and writing strategies.
2. Demonstrate college-level reading, writing, and analytical skills.
3. Demonstrate an understanding of the importance and influence of literature's study of the human condition in shaping and reflecting intellectual history and cultural identity.
4. Demonstrate, through the study and analysis of literature from a variety of cultural or ethnic backgrounds and sexual orientations, an ability to recognize and examine assumptions about difference and social norms and an understanding of how the experience of reading literature from different perspectives can better prepare one for meaningful participation in a diverse global community.
5. Explore and demonstrate through creative writing and/or analytical techniques, the practice and study of diverse literatures and publishing.

REQUIRED COURSES . . . . **Units**
The courses are listed in the suggested sequence.
ENGL 002 Critical Thinking and
        Writing About Literature 4
Select 2 courses (6 units) from List A 6
Select 2 courses (6 units) from List B 6
Select 2 courses (6 units) from List C. 6
Select 1 courses (3 units) from List D. 3
                                      Total Units 25

List A: Select two courses (6 units). . . . . Units
ENGL 030 Survey of American Literature I 3
ENGL 031 Survey of American Literature II 3
ENGL 040 Survey of English Literature I 3
ENGL 041 Survey of English Literature II 3

List B: Select two courses (6 units). . . . . Units
ENGL 006 Creative Writing 1 3
ENGL 021 Introduction to Poetry 3
ENGL 023 Introduction to the Modern Novel 3
ENGL 024 Introduction to the Short Story 3
ENGL 025 Introduction to Drama as Literature. 3
Any course from LIST A not already used 3

List C: Select two courses (6 units). . . . . Units
ENGL 007 Creative Writing II. 3
ENGL 010 Creative Writing III 3
ENGL 012 Modern Women Writers 3
ENGL 014 The Bible as Literature 3
ENGL 016 Masterpieces of Western World Literature . . . 3
ENGL 018 Introduction to Mythology 3
ENGL 033 Survey of African American Literature
         in the United States 3
ENGL 036 Multi-Ethnic Literature in America 3
ENGL 038 The California Experience in Literature. 3
ENGL 044 Introduction to Shakespeare 3
ENGL 058 Creative Writing: The Literary Magazine I . . . 3
Any course from List A or B not already used 3

List D: Select one course (3 units) . . . . Units
ENGL 005 Advanced Composition 3
ENGL 049 English Honors . . . . 1 – 3
ENGL 059 Creative Writing: The Literary Magazine II . . 3
HUMN 001 What it Means to be Human 3
Any course from List A, B, or C not already used 3

English

Associate in Arts in English for Transfer (ADT: A.A.-T)

Program Description
The Associate in Arts Degree in English for Transfer (AA-T) is for students who intend to complete a bachelor's degree in English at a CSU. Students will take courses in English as well as related fields required for English majors. This program teaches writing, critical thinking, reading, and research skills as they apply to the areas of composition, creative writing, and the analysis of literature. Course work in creative writing is presented in sequenced writing workshops and courses in literary publishing. Course work in literature explores primarily British and American writers through genre, survey, figure, and thematic courses.

Associate in Arts in English for Transfer
Students who complete this 19-unit major will be guaranteed admission with junior status to the California State University system, though not to a particular campus or major. In all cases, students should consult with a counselor for mor information on university admission and transfer requirements,

To earn the Associate in Arts in English for Transfer degree, students must:
1. Complete 60 semester units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements
   b. A minimum of 18 semester units in a major or area of emphasis, as determined by the community college district.
2. Obtain a minimum grade point average of 2.0.

Program Outcomes
Students who complete an Associate in Arts in English for Transfer will be able to:
1. Demonstrate an ability to compose and communicate using appropriate rhetorical patterns and writing strategies.
2. Demonstrate college-level reading, writing, and analysis skills.
3. Demonstrate an understanding of the importance and influence of literature's study of the human condition in shaping and reflecting intellectual history and cultural identity.
4. Demonstrate, through study and analysis of literature from a variety of cultural or ethnic backgrounds and sexual orientations, an ability to recognize and examine assumptions about difference and social norms and an understanding of how the experience of reading literature from different perspectives can better prepare one for meaningful participation in a diverse global community.
5. Explore and/or demonstrate, through creative writing and/or analytical techniques, the practice and study of diverse literatures and publishing.

REQUIRED COURSES . . . . **Units**
ENGL 002 Critical Thinking and
   Writing About Literature 4
Select two classes from List A (6 units) 6
Select two classes from List B (6 units) 6
Select one class from List C (3 units) 3
  Total Units **19**

LIST A: Select two (6 units)
ENGL 030 Survey of American Literature I 3
ENGL 031 Survey of American Literature II 3
ENGL 040 Survey of English Literature I 3
ENGL 041 Survey of English Literature II 3

LIST B: Select two (6 units) . . . . **Units**
ENGL 006 Creative Writing I 3
ENGL 007 Creative Writing II. 3
ENGL 010 Creative Writing III 3
ENGL 012 Modern Women Writers 3
ENGL 014 The Bible as Literature 3
ENGL 016 Masterpieces of Western World Literature . . . 3
ENGL 018 Introduction to Mythology 3
ENGL 021 Introduction to Poetry 3
ENGL 023 Introduction to the Modern Novel 3
ENGL 024 Introduction to the Short Story 3
ENGL 025 Introduction to Drama as Literature. 3
ENGL 033 Survey of African American
   Literature in the United States. 3
ENGL 036 Multi-Ethnic Literature in America 3
ENGL 038 The California Experience in Literature. 3
ENGL 044 Introduction to Shakespeare 3
ENGL 058 Creative Writing: The Literary Magazine I . . . 3
Any course from LIST A not already used 3

English

* 9 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.

ENGL 001   **4.0 Units**
College Composition
Corequisite: LR 010. Prerequisite: A score of 102 or better within the last three years on the sentence skills section of the assessment test; or SAT verbal score of at least 500; or ACT score of at least 23; or recommendation of a counselor or English instructor based on a Multiple Measures Evaluation; or a grade of Pass and a score of 8 or more on the Composition Mastery Final Examination upon completion of ENGL 305 or 350 or 355; or a grade of Pass in ENGL 370 or 348E or 380 or 348G or 360; or concurrent enrollment in ENGL 310D. A writing course which emphasizes critical reading, expository and argumentative writing, and mastery of library research techniques. It includes instruction and practice in critical thinking, in analytical reading and evaluation of written work, and in the methods of clearly communicating and supporting ideas in organized, coherent essays (min 750 words each). Students are required to write an average of 7500 formal words, including a research paper, based on essays, literature read in class, personal experience, and college-level research. *Four hours lecture.*

ENGL 002   **4.0 Units**
Critical Thinking and Writing About Literature
Prerequisite: ENGL 001 with a minimum grade of C. The development of critical thinking, reading, and writing skills as they apply to the analysis of fiction, poetry and drama, literary criticism, and related non-fiction from diverse cultural sources and perspectives. Emphasis is on the techniques and principles of effective written argument as they apply to literature. Essay examinations, critical papers, and some research projects are required. C-ID ENGL 110. *Four hours lecture.*

ENGL 004   **4.0 Units**
Critical Thinking and Composition:
Language In Context
Prerequisite: ENGL 001 with a minimum grade of C. Course Advisory: SCC minimum Math standard. A study of the process of thought and its representation in writing, focusing on the formation of responsible opinions and their presentation in written argument. This course offers practice in the intellectual skills necessary for critical thinking, including observation, analysis, and research; it provides instruction in the organization, arrangement, and stylistic presentation of informative and argumentative writing; it examines the informative and argumentative writing of others and requires students to write their own analytical and argumentative essays. Essay examinations and critical papers are required. *Four hours lecture.*

ENGL 005   **3.0 Units**
Advanced Composition
Prerequisite: ENGL 001 with a minimum grade of C. A writing course which continues the development of expository writing skills through the study of sentence structure and variety, appropriate diction, and rhetorical devices and through reading and discussing professional and student essays. Emphasis is on improving student's expository writing skills through peer and teacher critiques, revision, and developing proofreading skills. *Three hours lecture.*

ENGL 006   **3.0 Units**
Creative Writing I
Prerequisite: ENGL 001 with a minimum grade of C. An introductory study of creative writing techniques in multiple genres. Students develop self-expression through writing and through individual and class criticism of student work. Frequent writing is required. C-ID ENGL 200. *Three hours lecture.*

English

ENGL   007   3.0 Units
Creative Writing II
Prerequisite: ENGL 006 with a minimum grade of C. An advanced study of creative writing skills. Students will be expected to show proficiency in at least one genre (poetry, short story, drama, novel). Frequent writing and intense individual and class criticism of student work are requirements. *Three hours lecture.*

ENGL   010   3.0 Units
Creative Writing III
Prerequisite: ENGL 007 with a minimum grade of C. An advanced study of creative writing skills. Students will be expected to show proficiency in at least one genre (poetry, short story, drama, and novel). Frequent writing, intense individual and class criticism, and the compilation of an individual portfolio of genre-specific creative work are requirements. *Three hours lecture.*

ENGL   012   3.0 Units
Modern Women Writers
Prerequisite: ENGL 001 with a minimum grade of C. A study of 20th century women writers, concentrating on British and North American women writers. The course focuses on novels, short stories, poems, plays and essays written by women and attempts to define and assess the contributions of women writers to 20th century literature. Styles and themes employed in the literature, as well as the cultural and political background in which it was written, will also be examined and analyzed. Examinations and critical papers are required. *Three hours lecture.*

ENGL   014   3.0 Units
The Bible As Literature
Prerequisite: ENGL 001 with a minimum grade of C. A general survey of narratives, drama, poetry, biography, history, culture, and prophecy of the 'Old Testament,' 'The Apocrypha,' and the 'New Testament' with emphasis on literary interpretation of their content and techniques. *Three hours lecture.*

ENGL   016   3.0 Units
Masterpieces of Western World Literature
Prerequisite: ENGL 001 with a minimum grade of C. A study of a selection of major works in Western World literature from the Greeks to the present, excluding British Isles and American writers. This course will examine these selected major works, introducing the student to some of the most important literary efforts in Western World literature, as well as the works' historical and cultural contributions. Critical papers and examinations are required. *Three hours lecture.*

ENGL   018   3.0 Units
Introduction to Mythology
Prerequisite: ENGL 001 with a minimum grade of C. A survey of the major elements of mythology, its history and development as part of the human experience with a central focus on Western mythology, its origins and development as well as its appearance in and influence on literature. Examinations and papers are required. *Three hours lecture.*

ENGL   021   3.0 Units
Introduction to Poetry
Prerequisite: ENGL 001 with a minimum grade of C. A study of poetry as a form of literature and art. This course examines the elements of poetry, the historical development of the genre, and the major themes treated by poetry. Examinations and critical papers are required. *Three hours lecture.*

ENGL   023   3.0 Units
Introduction to the Modern Novel
Prerequisite: ENGL 001 with a minimum grade of C. A study of selected novels written during the 20th Century, including the development of the modern novel as a form of literature and the specific techniques and themes employed by novelists. Critical papers and examinations are required. *Three hours lecture.*

ENGL   024   3.0 Units
Introduction to the Short Story
Prerequisite: ENGL 001 with a minimum grade of C. A study of the short story as a form of literature, examining the historical development of the short story, the literary elements of the genre, and the major themes treated by the short story. Examinations and critical papers are required. *Three hours lecture.*

English

ENGL   025   **3.0 Units**
Introduction to Drama as Literature
Prerequisite: ENGL 001 with a minimum grade of C. A study of the types of dramatic literature/tragedy, comedy, and tragi-comedy/through a historical survey of representative dramas. Students will read, analyze, compare and contrast selected plays in class. Examinations and critical papers are required. *Three hours lecture.*

ENGL   030   **3.0 Units**
Survey of American Literature I
Prerequisite: ENGL 001 with a minimum grade of C. A survey of literature written in the United States from the time of early settlement to the end of the Civil War. Through focus on significant works of diverse writers, attention is given to major literary movements and to understanding, comparing, and contrasting the diverse political, religious, social, and cultural elements of literature in the United States. Written examinations and critical papers are required. C-ID ENGL 130. *Three hours lecture.*

ENGL   031   **3.0 Units**
Survey of American Literature II
Prerequisite: ENGL 001 with a minimum grade of C. A survey of literature written in the United States from the end of the Civil War to the present. Through focus on significant works of diverse writers, attention is given to significant literary movements and to understanding, comparing and contrasting the diverse political, religious, social and cultural elements of literature in the United States. Written examinations and critical papers are required. *Three hours lecture.*

ENGL   033   **3.0 Units**
Survey of African American Literature in the United States
Prerequisite: ENGL 001 with a minimum grade of C. A study of representative selections of poetry, short fiction, short drama, and essays written by African Americans from 1760 to the present. The ethnic context, artistic techniques, and literary themes will be studied. Critical papers and written examinations are required. *Three hours lecture.*

ENGL   036   **3.0 Units**
Multicultural Literature in America
Prerequisite: ENGL 001 with a minimum grade of C. A study of representative literature by various American multicultural writers: Asian American, African American, European American, Latina/o, and Native American. Written examinations and critical papers are required. *Three hours lecture.*

ENGL   038   **3.0 Units**
The California Experience in Literature
Prerequisite: ENGL 001 with a minimum grade of C. A study of literature written by California writers, including historical and cultural backgrounds, variety of regional and ethnic experiences, and unifying themes, concepts, and dreams. *Three hours lecture.*

ENGL   040   **3.0 Units**
Survey of English Literature I
Prerequisite: ENGL 001 with a minimum grade of C. The study of works of major British authors from the Anglo-Saxon period through the Eighteenth Century, in poetry, prose, and drama. The course focuses on the development of a literature in English and explores how this literature responds to and shapes its historical and cultural context. It introduces students to the use of critical theory in the analysis of literature. Examinations and critical papers are required. C-ID ENGL 160. *Three hours lecture.*

ENGL   041   **3.0 Units**
Survey of English Literature II
Prerequisite: ENGL 001 with a minimum grade of C. A study of major works in poetry, prose, and drama from approximately 1798 to the present. The course focuses on the Romantic Movement, the Victorian Age, early 20th Century, modernism, postwar literature, post-colonial literature, and late 20th Century post-modernism. It examines the shifting relationship between literature and its historical and cultural contexts. It introduces students to questions of canon formation and the use of critical theory in the analysis of literature. Examinations and critical papers are required. C-ID ENGL 165. *Three hours lecture.*

ENGL 044   **3.0 Units**
Introduction to Shakespeare
Prerequisite: ENGL 001 with a minimum grade of C. An introduction to Shakespearean drama and poetry through a study of representative comedies, histories, tragedies, and sonnets. Students will be concerned with dramatic and poetic principles as well as with an understanding of the historical context into which Shakespearean drama fits. Examinations and critical papers are required. *Three hours lecture.*

ENGL 049   **1.0 to 3.0 Units**
English Honors
Prerequisite: Completion of 24 units of college credit with a minimum GPA of 3.3; a minimum of 5 units in the discipline with a minimum grade of B; an ability to work independently; permission of the School Dean based on instructor availability. An independent study project which generally results in a critical examination of literature of significant creative and/or analytical writing. Students may take this course up to the maximum number of units over multiple semesters. *Three to nine hours by arrangement with instructor and School Dean.*

ENGL 051   **3.0 Units**
Technical Writing
Prerequisite: A score of 102 or better in the last three years on the sentence skills section of the assessment test; or recommendation of a counselor or English instructor based on a Multiple Measures Evaluation; or a grade of 'Credit' and a score of 8 or more on the Composition Mastery Final Examination upon completion of ENGL 305 or 350 or 355; or a grade of 'Credit' in ENGL 370. Course Advisory: Keyboarding skills. The fundamentals of technical writing, including memos, forms, resumes, proposals, and formal and informal reports. Emphasis is on techniques for organizing, evaluating, and presenting information in the simple, direct, and objective style required in modern technical communications. Use of word processing, desktop publishing, graphics, tables, appropriate fonts, layout, and format will also be emphasized. *Three hours lecture.*

ENGL 058   **3.0 Units**
Creative Writing: The Literary Magazine
Prerequisite: ENGL 001 with a minimum grade of C. A course in the contemporary American Literary magazine which will also produce its own literary magazine: requesting submissions, reviewing them, selecting material, arranging contents and determining the format. Students may write creatively and make their work available for class commentary, as well as for possible inclusion in the magazine. *Three hours lecture.*

ENGL 059   **3.0 Units**
Creative Writing: The Literary Magazine II
Prerequisite: ENGL 058 with a minimum grade of C. An advanced study of the contemporary American literary magazine and the practice of publishing its own literary magazine, The Suisun Valley Review, where the student is expected to assume a lead editorial role. Students may write creatively and make their work available for class commentary, as well as for possible inclusion in the magazine. *Three hours lecture.*

ENGL 087   **1.0 to 2.0 Units**
Drama in Performance
Prerequisite: Permission of instructor to confirm opening. Course Advisory: ENGL 001. Introduction to the principles of drama through a study of plays being presented at the Oregon Shakespearean Festival. A travel study course. *Sixteen to thirty-two hours lecture. (1-week course)*

ENGL 305   **3.0 Units**
Introductory Reading and Writing Skills
Intensive instruction in developmental language processing skills, reading and writing skills, and general classroom survival skills. Success in this class will be based on attendance, satisfactory completion of in- and out-of class reading and writing assignments and the Composition Mastery Examination. This is a Pass/No Pass only course. *Three hours lecture.*

English

ENGL 310   **0.5 to 1.5 Units**
Writing Skills Lab
Upon registration, each student's writing sample will be used to identify his/her individual writing problems, and an individualized program will be designed to provide instruction in those problem areas. Credit will be earned upon successful completion and mastery of the student's course of study and an appropriate number of hours as specified in each student's contract. Students may take this course up to the maximum number of units over multiple semesters. *This is an Open Entry/Open Exit, Pass/No Pass only course. One to three hours by arrangement.*

ENGL 310A   **1.5 Units**
Introductory Reading and Writing Skills
Intensive instruction in developmental language processing skills, reading and writing skills, and general college survival skills. Success in this lab will be based on attendance, satisfactory completion of in-class reading and writing assignments. *This is a Pass/No Pass only course. Two hours lab, two and one-half hours by arrangement.*

ENGL 310D   **1.0 Unit**
Advanced English Skills Lab
Prerequisite: A score of 90 or better on the sentence skills section of the assessment test; or SAT verbal score of at least 500; or ACT score of at least 23; or recommendation of a counselor or English instructor based on a Multiple Measures Evaluation (decided upon by the English department); or a grade of Pass and a score of 8 or more on the Composition Mastery Final Examination upon completion of ENGL 305 or 350 or 355; or a grade of Pass in ENGL 370 or 348E or 380 or 348G or 360; or a high school cumulative GPA of 2.7 with Junior AP English with grade of C+ or better or a B in Junior or Senior English. Intensive instruction in advanced reading and writing skills for students who are currently taking English 001 or other transfer-level content courses. This class is designed to help students further hone their craft as writers and readers. Success in this lab will be based on attendance and satisfactory completion of in- class reading and writing assignments. *This is a Pass/No Pass course. Three hours lecture.*

ENGL 350   **3.0 Units**
Reading and Writing Skills for ESL Students
Corequisite: This course must be taken together with 1.5 units of English 350L. Prerequisite: ENGL 350L (may be taken concurrently). A score of 51-69 within the last three years on the sentence skills section of the assessment test; or Recommendation of a counselor or English instructor based on a Multiple Measures Evaluation; or A grade of Pass or better and a score of 4 or more on the Composition Mastery Final Examination upon completion of ENGL 305 or ESL 6. Combines writing and reading practice to increase skill in developing clear paragraphs and short essays. This course includes an intensive study of grammar, reading comprehension, and ways to find ideas. ESL students will acquire new language patterns for writing standard American English. Credit for this course will be given only when the requirements of both components have been completed. T*his is a Pass/No Pass only course. Three hours lecture.*

ENGL 350L   **1.5 Units**
English 350 Lab
Corequisite: ENGL 350. Upon registration in English 350L, students will go through structured curriculum which develops their reading and writing skills. Credit will be earned upon successful completion and mastery of the course of study and completion of the appropriate number of hours as specified. Students who fail the coreq ENGL 350 twice must enroll in ENGL 310 for individualized instruction. *This is a Pass/No Pass only course. Four and one-half hours Lab.*

ENGL 355   **3.0 Units**
Writing and Reading Skills
Corequisite: This course must be taken together with 1.5 units of 355L. Prerequisite: A score of 51-69 within the last three years on the sentence skills section of the assessment test; or recommendation of a counselor or English instructor based on a Multiple Measures Evaluation; or a grade of Pass or better and a score of 4 or more on the Composition Mastery Final Examination upon completion of ENGL 305 or 350. Combines writing and reading practice to increase skill in developing clear paragraphs and short essays. This course includes an intensive study of grammar, reading comprehension, and ways to find ideas. Credit for this course will be given only when the requirements of both components have been completed. *This is a Pass/No Pass only course. Three hours lecture.*

English

ENGL 355L   **1.5 Units**
English 355 Lab
Corequisite: ENGL 355. Upon registration in English 355L, students will go through structured curriculum which develops their reading and writing skills. Credit will be earned upon successful completion and mastery of the course of study and completion of the appropriate number of hours as specified. *This is a Pass/No Pass only course. Four and one-half hours lab.*

ENGL 359   **5.0 Units**
Accelerated English
This is an intensive, accelerated English course which gives students the tools to read and write the sort of sophisticated texts required of them in transfer level courses. This course covers the same content as English 360, but it is designed for students who are eligible for English 310A or English 355 or an assessment score of 1-69 on the sentence skills portion of the assessment test. There is no lab component to this course. *Five hours lecture.*

ENGL 360   **5.0 Units**
Focused English Fundamentals
Prerequisite: A score of 70-101 within the last three years on the sentence skills section of the assessment test; or recommendation of a counselor or English instructor based on a Multiple Measures Evaluation; or a grade of Pass and a score of 6 or more on the Composition Mastery Final Examination upon completion of English 305 or 350 or 355 or 359 or ESL 6. This is an intensive English course which gives students the tools to read and write the sort of sophisticated texts required of them in transfer level courses. This course covers the same content as English 359, but it is designed for students who are eligible for English 370 or English 380 or have an assessment score of 70-101 on the sentence skills portion of the assessment test. There is no lab component to this course. *This is a Pass/No Pass only course. Five hours lecture.*

ENGL 370   **3.0 Units**
English Fundamentals
Prerequisite: ENGL 370L (may be taken concurrently) and A score of 70-101 within the last three years on the sentence skills section of the assessment test; or recommendation of a counselor or English instructor based on a Multiple Measures Evaluation; or a grade of Credit and a score of 6 or more on the Composition Mastery Final Examination upon completion of English 305 or 350 or 355 or ESL 6. Course Advisory: ENGL 353. Principles and practice of English composition, emphasizing analytical paragraphs and essays; critical reading, thinking, and writing; principles of essay and paragraph construction; grammar and punctuation; construction of effective sentences. Credit for the course will be given only when the requirements for all components have been met. *This is a Pass/No Pass only course. Three hours lecture.*

ENGL 370L   **0.5 Unit**
English Fundamentals Lab
Corequisite: ENGL 370 Prerequisite: A score of 70-101 within the last three years on the sentence skills section of the assessment test; or · Recommendation of a counselor or English instructor based on a Multiple Measures Evaluation; or · A grade of Pass or better and a score of 6 or more on the Composition Mastery Final Examination upon completion of ENGL 305 or 350 or 355 or ESL 6. Upon registration in English 370L, students will go through structured curriculum which develops their reading and writing skills. Credit will be earned upon successful completion and mastery of the course of study and completion of the appropriate number of hours as specified. Students who fail the coreq ENGL 370 twice must enroll in ENGL 310 for individualized instruction. *This is a Pass/No Pass only course. One and one-half hours lab.*

ENGL 380   **3.0 Units**
Advanced English Fundamentals
Prerequisite: A score of 90-101 within the last three years on the sentence skills sections of the assessment test. Course Advisory: ENGL 353. Principles and practice of English composition, emphasizing analytical paragraphs and essays; critical reading, thinking, and writing; principles of essay and paragraph construction; grammar and punctuation; construction of effective sentences. *This is a Pass /No Pass only course. Three hours lecture.*

English

Reading

ENGL   062   **3.0 Units**
Analytical Reading
Prerequisite: Eligibility for ENGL 370. Course Advisory: ENGL 353. A college-level reading course designed to improve and enhance the student's ability to understand inferential reading passages. Emphasis is on the development of critical reading skills, including the ability to understand the author's point of view and to engage in textual analysis. In addition, the student should develop the ability to successfully critique college-level reading material by analyzing a variety of prose structures. *Three hours lecture.*

ENGL   320   **0.5 to 1.5 Units**
Reading Improvement Lab
Designed to identify students' individual reading needs and to provide individualized instruction. Students will be assigned a worktext based on assessment in consultation with a Reading instructor. Credit will be earned when student has successfully completed the assigned course of study and appropriate number of lab hours as specified in each student's contract. Students may take this course up to the maximum number of units over multiple semesters. *This is an Open Entry/Open Exit, Pass/No Pass only course. One to six hours by arrangement.*

ENGL   331   **3.0 Units**
Vocabulary Strategies for Reading Comprehension
Course Advisory: CPT Reading score of 35 to 49. A vocabulary skills development course designed to help students learn new words to understand reading. This course will emphasize strategies for word analysis and dictionary use to identify, learn, use, and retain meanings of unfamiliar words. *This is a Pass/No Pass only course. Three hours lecture.*

ENGL   353   **3.0 Units**
Textbook Reading Strategies
Course Advisory: CPT Reading score of 50 or above. Reading strategies and practice to improve understanding, enlarge vocabulary, and improve retention. Students will learn how to comprehend main idea-supporting detail relationships, use the knowledge they already have, recognize organizational patterns and author's purpose, and respond thoughtfully through discussion and writing. To develop skills in college study reading, primary emphasis is on reading materials typically found in textbooks. *This is a Pass/No Pass only course. Three hours lecture.*

English as a Second Language

ESL   006   **3.0 Units**
ESL: Composition Skills
Prerequisite: Minimum grade of C in ESL 078 or ESL 079. Course Advisory: ESL Assessment Test Score: Level 1. An advanced class for non-native speakers of English which offers practice in academic writing. Emphases include paragraph and essay logic, writing from sources, advanced sentence structure, and vocabulary building. Frequent compositions, quizzes, graded exercises, and a final exam are required. This course is a prerequisite for English 350 for those students who score 31-75 on the ESL assessment test. *Three hours lecture.*

ESL   055   **3.0 Units**
Advanced ESL Reading
Prerequisite: A minimum grade of C in ESL 078, or ESL 079, or ESL Assessment Test Score: Level 1. This course provides the advanced ESL student with extensive reading practice using guided exercises to develop effective reading strategies and encourages reflective and critical thinking through discussions and journal responses. Comprehension and writing exercises, quizzes and a final exam are required for the successful completion of this course. *Three hours lecture.*

English

ESL 074   **6.0 Units**
Intermediate Integrated ESL Skills
Prerequisite: A minimum grade in ESL 372 and 374, or ESL 334 with a minimum grade of C, or ESL 334B with a minimum grade of C, or LOEP score: 2/3 in the range of 50-85. ESL 074 brings together reading, composition, and grammar skills for intermediate-level ESL students. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph-length compositions, and develop control of a range of sentence structures and verb forms. Not available to students who have completed both ESL 078 and ESL 079. Not available to students who have completed ESL 074A and/or ESL 074B. *Six hours lecture.*

ESL 074A   **3.0 Units**
Intermediate Integrated ESL Skills: Part 1
Prerequisite: Minimum grade of C in ESL 372 and ESL 374, or ESL 334 with a minimum grade of C, or ESL 334B with a minimum grade of C, or LOEP Score: 2/3 scores in the range of 50 - 85. ESL 074A is the first half of our two-part intermediate integrated skills course, which brings together reading, composition, and grammar skills for intermediate-level ESL students. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph-length compositions, and develop control of a range of sentence structures and verb forms. Not available to students who have completed ESL 074. Not available to students who have completed both ESL 078 and 079. *Three hours lecture.*

ESL 074B   **3.0 Units**
Intermediate Integrated ESL Skills Part 2
Prerequisite: A minimum grade of C in ESL 372 or 374, or ESL 334 with a minimum grade of C, or a minimum grade of C in ESL 334A and 334B, or LOEP Scores: 2/3 scores 50 - 85, or instructor approval. Course Advisory: ESL 074A with a minimum grade of C. ESL 074B is the second half of our two-part intermediate integrated skills course, which brings together reading, composition, and grammar skills for intermediate-level ESL students. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph-length compositions, and develop control of a range of sentence structures and verb forms. Not available to students who have completed ESL 074. Not available to students who have completed ESL 078 and ESL 079. *Three hours lecture.*

ESL 077   **3.0 Units**
Conversation/Pronunciation Skills
Corequisite: Concurrent enrollment in ESL 077L. Prerequisite: A minimum grade of C in ESL 372, or ESL 373, or ESL 374. Course Advisory: ESL Assessment Test Score: At or above Level 2. Offers practice in acquiring patterns of American English grammar and pronunciation for the purpose of conversing clearly and completely. Includes practice in critically evaluating semantic and syntactic contrasts among various languages represented by students. *Three hours lecture.*

ESL 077L   **0.5 Unit**
ESL 077 Lab
Corequisite: ESL 077. Course Advisory: Familiarity with basic reading and writing skills: English alphabet letter names, numbers, and ability to follow directions. Provides structured listening comprehension and pronunciation practice, basic grammar practice, and elementary word processing practice for students new to the English language who wish to improve their own ability to speak and understand clearly. Instruction is individualized. Materials for the lab may be purchased in the bookstore. *This is an Open Entry/Open Exit, Pass/No Pass only course. One and one-half hours lab.*

ESL 078   **3.0 Units**
Intermediate ESL Reading
Prerequisite: A minimum grade of C in ESL 372 or ESL 373 or ESL 374. Course Advisory: ESL Assessment Test Score: At or above Level 2. Offers development in reading and vocabulary improvement for the intermediate ESL student. College-level reading passages range from narration to argumentation. Students practice the phonetic structure of the English sound and spelling systems to decrease confusion in reading comprehension. Graded exercises, quizzes, comprehension tasks, unit tests, and a final exam are required for successful completion of this course. *Three hours lecture.*

English

ESL   079   **3.0 Units**
Intermediate Sentence Structure:
The English Verb System
Prerequisite: A minimum grade of C in ESL 372 or ESL 373 or ESL 374. Course Advisory: ESL Assessment Test Score: At or above Level 2. An intermediate English course for non-native speakers focusing on the correct use of basic English sentence structures in oral communication. Knowledge of the structures reinforced and verified through written assignments. *Three hours lecture.*

ESL   087   **3.0 Units**
Advanced Sentence Structure: Written English
Prerequisite: Minimum grade of C in ESL 078 or 079, or ESL Assessment Test score: Level 1. An advanced English course for non-native speakers focusing on the correct use of basic English structures in written communication. Knowledge of the structures reinforced and verified through written assignments. Continuation of ESL 079. *Three hours lecture.*

ESL   094   **6.0 Units**
Advanced ESL Integrated Skills
Prerequisite: ESL078 with a minimum grade of C or ESL079 with a minimum grade of C or LEOP scores; at least 2/3 scores over 85. ESL 094 brings together the reading, composition, and grammar skills offered in the advanced, discrete-skills courses ESL 055, ESL 006, and ESL 087. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph- and essay-length compositions, and practice the grammatical structures necessary to performing a variety of rhetorical tasks. ESL 094 prepares ESL students for the reading and writing demands of 300-level English courses. *Six hours lecture.*

ESL   094A   **3.0 Units**
Advanced ESL Integrated Skills Part 1
Prerequisite: A minimum grade in ESL 078, or ESL 079, or ESL 074, or ESL 074B, or LEOP scores: at least 2/3 over 85, or instructor approval. ESL 094A is the first half of our two-semester advanced integrated skills course, bringing together the reading, composition, and grammar skills to prepare non-native English speakers for the reading and writing demands of 300-level English courses. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph- and essay-length compositions, and practice the grammatical structures necessary to performing a variety of rhetorical tasks. Not available to students who have already taken ESL 094. Not available to students who have already taken ESL 055 AND ESL 006. *Three hours lecture.*

ESL   094B   **3.0 Units**
Advanced ESL Integrated Skills Part 2
Prerequisite: A minimum grade of C in ESL 074, or a minimum grade of C in both ESL 078 and ESL 079, or a minimum grade of C in both ESL 074A and ESL 074B, or LOEP scores: 2/3 above 85, or intstructor approval. Course Advisory: ESL 094A with a minimum grade of C. ESL 094B is the second half of our two-semester advanced integrated skills course, bringing together the reading, composition, and grammar skills to prepare non-native English speakers for the reading and writing demands of 300-level English courses. Students will study vocabulary and comprehension strategies for academic reading, read extensively for fluency, compose paragraph- and essay-length compositions, and practice the grammatical structures necessary to performing a variety of rhetorical tasks. Not available to students who have already completed ESL 094. Not available to students who have already taken ESL 055 AND ESL 006. *Three hours lecture.*

English

ESL   330   0.5 to 1.5 Units
ESL Lab
Course Advisory: Familiarity with basic reading and writing skills: English alphabet letter names, numbers, and ability to follow directions. Provides structured listening comprehension and pronunciation practice, basic grammar practice, and elementary word processing practice for students new to the English language who wish to improve their own ability to speak and understand clearly. Students may take this course up to the maximum number of units over multiple semesters. *This is an Open Entry/Open Exit, Pass/No Pass only course. One and one-half to four and one-half hours lab.*

ESL   334   6.0 Units
Introductory Integrated ESL Skills:
Reading, Writing, and Grammar
Course Advisory: Familiarity with basic reading and writing skills, English alphabet letter names, numbers, and ability to follow directions, and ESL test score for Level 1. ESL 334 introduces reading, writing, and grammar skills for low-intermediate-level ESL students. Students will study vocabulary and comprehension strategies, read for fluency, compose paragraphs, and develop familiarity with basic English sentence patterns and verb forms. Not available to students who have completed ESL 334A or 334B. *Six hours lecture.*

ESL   334A   3.0 Units
Introductory Integrated ESL Skills:
Reading, Writing, and Grammar Part 1
Prerequisite: LOEP Assessment test score up to 30. ESL 374A is the first half of our two-semester introductory integrated skills course, introducing the reading, writing and grammar skills for low-intermediate level non-native English speakers. Students will study vocabulary and comprehension strategies, compose paragraphs and develop familiarity with basic English sentence patterns and verb forms. Not available to students who have completed ESL 334. *Three hours lecture.*

ESL   334B   3.0 Units
Introductory Integrated ESL Skills:
Reading, Writing, and Grammar Part 2
Prerequisite: LOEP Assessment test scores up to 30. Course Advisory: ESL 334A with a minimum grade of C. ESL 374B is the second half of our two-semester introductory integrated skills course, introducing the reading, writing and grammar skills for low-intermediate level non-native English speakers. Students will study vocabulary and comprehension strategies, compose paragraphs and develop familiarity with basic English sentence patterns and verb forms. Not available to students who have completed ESL 334. *Three hours lecture.*

ESL   372   3.0 Units
Fundamentals of ESL Reading
Course Advisory: Familiarity with basic reading and writing skills, English alphabet letter names, numbers, and ability to follow directions and ESL Assessment Test Score: Level 3. Offers practice in high beginning level reading comprehension, vocabulary acquisition and writing skills development for the ESL student who is still developing fluency. *Three hours lecture.*

ESL   373   3.0 Units
ESL Basic Oral Communication Skills
Corequisite: ESL 373L; Course Advisory: Familiarity with basic reading and writing skills, English alphabet letter names, numbers, and ability to follow directions and ESL Assessment Test Score: Level 3. For students still developing fluency in spoken English, this course offers practice in mastering the patterns of spoken American English through study of the English sound system (pronunciation), conversation strategies, related grammar, writing, and spelling at a high-beginning level of proficiency with oral communication and listening as the focus. *Three hours lecture.*

ESL   373L   0.5 Unit
ESL 373 Lab
Corequisite: ESL 373. Provides structured listening comprehension and pronunciation practice, basic grammar practice, notetaking practice and elementary word processing practice for students new to the English language who wish to improve their own ability to speak and understand clearly. Instruction is individualized. Materials for the Lab may be purchased in the Solano College Bookstore. *One and one-half hours lab.*

English

ESL   374   **3.0 Units**
Fundamentals of ESL Grammar
Course Advisory: Familiarity with basic reading and writing skills, English alphabet letter names, numbers, and ability to follow directions and ESL Assessment Test Score: Level 3. The major goals of this course are increasing fluency and comprehension in speaking, listening, reading and writing English through the careful, guided study of grammar: Present, future and past verb tenses, singular and plural nouns, constructing simple sentences, special verbs and patterns, idioms to facilitate communication, spelling and study skills for learning a language. Attendance, participation, completion of quizzes and homework assignments requiring reading and writing will determine the student's success in completing the course. *Three hours lecture.*

ESL   534A   **Non-Credit**
Introductory Integrated ESL Skills:
Reading, Writing and Grammar Part 1
Course Advisory: Familiarity with basic reading and writing skills, English alphabet letter names, numbers, and ability to follow directions, and ESL test score for "Level 1." ESL 534A is the first half of our non-credit, two-semester introductory integrated skills course. This course introduces reading, writing and grammar skills for low-intermediate level English learners. Students will study vocabulary and comprehension strategies, compose paragraphs and develop familiarity with basic English sentence patterns and verb forms. *Three hours lecture.*

Learning Resources

LR   010   **1.0 Unit**
Intro Lbry Resrch/Info Comptnc
Course Advisory: SCC minimum Math standards. An introduction to Information Competency skills necessary to use research tools and to select, locate, retrieve and evaluate information. *One hour lecture.*

LR   011   **1.5 Units**
Internet Explored:
Advanced Information Competency
Course Advisory: Eligibility for English 001, Computer literacy (familiarity with basic computer functions). An advanced information competency course evaluating information and exploring information technology in society including Internet, World Wide Web, search engines (e.g., Google, Ask, Live), retrieval systems, and electronic publishing. Formerly LR 05. *One and one-half hours lecture.*