

Programs

Solano Community College offers a wide variety of programs and courses leading to the Associate in Arts or Associate in Science Degrees. These courses are also available to students who wish to develop personal and technical competence in an occupational area or in an academic discipline. Some programs offer specific areas of concentration within a degree.

A number of Certificate of Achievement programs are offered for students seeking specialized training in specific fields. All courses for the Certificate must be completed with a grade of C or better or a P if the course is taken on a pass-no pass basis. All credits earned in certificate programs may be counted toward the A.S./A.A. degree and in some instances credit for certificate courses may be transferable to four-year colleges. To be eligible for a certificate, at least six semester units in the field or a closely related subject must be completed at Solano Community College.

A number of Job-Direct certificate programs are also offered. These programs are specifically designed to prepare students for employment in the identified field. Not all credits earned in the Job-Direct certificate programs may be counted toward the A.S./A.A. degree or the Certificate of Achievement.

Students planning to transfer to four-year institutions should consult the catalog of the college to which they intend to transfer. Also, they should meet with a counselor to coordinate their A.S./A.A. courses with transfer requirements. This is the best way to ensure that the program taken at Solano College satisfies lower division requirements of the transfer institution.

Requirements for all programs leading to the Associate of Arts or Science Degrees, Certificates of Achievement, and Job Direct Certificates appear on the following pages.

Guide to Catalog Course Listings

Individual courses are listed under the programs of the same name (i.e., Accounting courses under "Accounting" and Business courses under "Business") except for the following:

<u>Courses</u>	<u>Listed Under</u>	<u>Courses</u>	<u>Listed Under</u>
Air Conditioning & Refrig (ACR)	Industrial Education	Learning Skills (LS)	Counseling
American Studies (AMST)	Liberal Arts	Maintenance Technician (MT)	Industrial Education
Anthropology (ANTH)	Science, General	Meteorology (METR)	Science, General
Astronomy (ASTR)	Science, General	Nursing (NURS)	Health Occupations
Athletics (ATHL)	Physical Education, Wellness & Athletics	Nutrition (NUTR)	Physical Education, Wellness & Athletics
Cinematography (CINA)	Film & Television	Physical Science (PHSC)	Science, General
Education (EDUC)	Liberal Arts	Portuguese (PORT)	Foreign Languages
Emergency Medical Technician (EMT)	Health Occupations	Sociology (SOC)	Social Sciences
English as a Second Language (ESL)	English	Spanish (SPAN)	Foreign Languages
French (FREN)	Foreign Languages	Speech (SPCH)	Communications Studies
Geography (GEOG)	Science, General	Tagalog (TAG)	Foreign Languages
Geology (GEOL)	Science, General	Television (TV)	Film & Television
German (GRMN)	Foreign Languages	Tutoring (TUTR)	Counseling
Health Education (HED)	Physical Education, Wellness & Athletics		
Human Development (HUDV)	Home Economics	Other Categories	Listed Under
Humanities (HUMN)	Liberal Arts	Computer Servicing Tech.	Electronics major
Industrial Management (IMGT)	Industrial Education	Graphic Design & Illustration major	Art major
Industrial Technology (IT)	Industrial Education	Reading courses	English major
Insurance (BUS)	Business	Sports Med./Fitness Sci major	Physical Education, Wellness & Athletics
Italian (ITAL)	Foreign Languages		
Japanese (JAPN)	Foreign Languages		
Latin (LATN)	Foreign Languages		
Learning Resources (LR)	Liberal Arts		

Program Degrees and Certificates

	Assoc Degree	Certificate		Assoc Degree	Certificate
Accounting	•	•	Interdisciplinary Studies (with Emphasis)	•	
Aeronautics			Arts and Humanities	•	
Airframe Maintenance Technician	•	•	Communication	•	
Powerplant Maintenance Technician	•	•	Science and Quantitative Reasoning	•	
Airframe & Powerplant Maintenance Technician	•	•	Social Science	•	
Avionics Technician	•	•	Wellness and Self-Development	•	
Art			International Relations	•	
Two Dimensional	•		Interior Design	•	
Three Dimensional	•		Journalism	•	
Art History	•		Life Management	•	•
Graphic Design & Illustration	•		Management	•	•
Automotive			Small Business Management	•	•
Body & Repair Technician	•	•	Retail Management	•	•
Banking & Finance, Bank Operation	•	•	Marketing	•	•
Biology	•		Mathematics	•	
Business, General (Transfer)	•	•	Mathematics for Transfers	•	
Business-Insurance: Property & Casualty	•	•	Music		
Chemistry	•		Instrumental	•	
Communication Studies	•		Theory-Composition	•	
Computer & Information Science			Vocal	•	
Computer Programming	•	•	Nursing, Registered	•	
Microcomputer Applications	•	•	Office Technology		
Web Development and Administration	•	•	Administrative Assistant	•	•
Cosmetology	•	•	Legal Specialist	•	•
Criminal Justice			Medical Office Specialist	•	•
Corrections	•	•	Medical Transcription Specialist	•	•
Law Enforcement	•	•	Photography, Professional	•	•
Computer Forensics		•	Physical Education	•	
Drafting Technician	•	•	Physics	•	
Early Childhood Education	•	•	Political Science	•	
Electronics			Psychology	•	
Electronic Technology	•	•	Real Estate	•	•
English	•		Science, General	•	
Ethnic Studies			Social Science	•	
African-American Studies	•		Sociology	•	
Asian-American Studies	•		Sociology for transfer	•	
Ethnic Studies Combination	•		Sports Medicine/Fitness Science		
Latino Studies	•		Transfer	•	
Native American Studies	•		Theatre Arts	•	
Film and Television	•		University Studies - (With Emphasis)		
Fine Arts	•		Arts and Humanities	•	
Fire Technology	•	•	Communication	•	
Hazardous Substance and Waste Handling Technician		•	Liberal Studies for Elementary Teacher Preparation	•	
Foreign Languages, General	•		Science and Quantitative Reasoning	•	
Foreign Languages, Individual:			Social Science	•	
French	•		Water & Wastewater Technology	•	•
German	•		Welding		
Spanish	•		Industrial Technician	•	•
History	•		Technician	•	•
Horticulture Science	•	•			
Horticulture Science					
Human Services	•	•			
Applied Biotechnology		•			
Industrial Biotechnology	•	•			
Industrial Education					
Industrial Management, Safety	•	•			
Maintenance Technician	•	•			

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. A coding directly below the title of some courses indicates when the course is usually offered. "F" indicates fall semester and "S" indicates spring semester. If no coding appears for a course, however, it does not mean the course is offered every semester, day and night. 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) 864-7115 and online: www.solano.edu/vistas.

CO/PREREQUISITES AND ADVISORIES

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

Co-requisite details: There are two types of co-requisites. 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 co-requisites 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 co-requisite is blocked until the requirements of the co-requisite 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 co-requisites 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. Co-requisite 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 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 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.

Announcement of Courses & Course Numbers

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/Co-requisite,” 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 AA/AS Degree; transfer to the University of California system and the California State Universities.
- 050-099** Qualify for the AA/AS Degree and transfer to the California State Universities.
- 100-199** Qualify for the AA/AS 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 AA/AS Degree and do not transfer to four-year institutions.
- 300-399** Credit courses which DO NOT apply to the AA/AS 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.

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 an Accounting A.A. 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 an 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 050 Microcomputer Applications	3
<i>or</i>	
CIS 001 Introduction to Computer Science	3
CIS 066 Microsoft Word	3
<i>or</i>	
CIS 063 WordPerfect	3
CIS 073 Microsoft Excel	3
Total Units	29

Recommended Electives:

OCED 090 Occupational Work Experience
OCED 091 General Work Experience

Account Clerk Job-Direct Certificate

All courses in the major must be completed with a grade of C or better

Required Courses	Units
BUS 100 Work Readiness	1.5
CIS 073 Microsoft Excel	3
ACCT 180 Introduction to Accounting	3
OT 162 Ten-Key	1
Total Units	8.5

Accounting

ACCT 001 Principles Of Accounting—Financial <i>Course Advisories: SCC minimum English and math standards; Working knowledge of Excel helpful.</i> A study and analysis of the accounting cycle, accruals and deferrals, inventory, receivables, plant assets, accounting systems, error correction, and financial reporting. <i>Four hours lecture.</i>	4.0 Units	ACCT 176 Intermediate Accounting <i>Prerequisite: ACCT 002 with a grade of “C” or “CR” or better. Course Advisory: Working knowledge of Excel helpful.</i> 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. <i>Four hours lecture.</i>	3.0 Units
ACCT 002 Principles Of Accounting—Managerial <i>Prerequisite: ACCT 001 with a grade of ‘C’ or ‘CR’ or better. Course Advisory: Working knowledge of Excel helpful.</i> A study and analysis of the managerial accounting concepts and theory including the following: 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; analysis of financial reporting; and tax implications of managerial decisions. In addition, a study of corporate reporting, bonds and long-term liabilities, long-term investments, and reporting and analyzing cash flows. <i>Four hours lecture.</i>	4.0 Units	ACCT 177 Principles of Cost Accounting <i>Prerequisite: ACCT 002 with a grade of ‘C’ or ‘CR’ or better.</i> A comprehensive study and analysis of manufacturing costs as they apply to planning, controlling, and determining unit costs, inventory valuation, and income. <i>Three hours lecture.</i>	3.0 Units
ACCT 050 Computer Accounting <i>Prerequisite: Acct 001. Course Advisories: SCC minimum English and Math Standards.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ACCT 180 Introduction To Accounting <i>Course Advisories: SCC minimum English and math standards.</i> 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. <i>Three hours lecture.</i>	3.0 Units
		ACCT 183 Principles Of Income Tax <i>Course Advisories: SCC minimum English and math standards.</i> A comprehensive study and analysis of the principles of federal income tax applied to individual, partnership, informational, and corporate tax returns. <i>Three hours lecture.</i>	3.0 Units

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 1900 hours (four full semesters and one four week summer session) of instruction to complete the combination airframe and 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 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

Recommended Electives:

AERO 110 Instrument Power Distribution & Flight Control Systems
AERO 111 Aircraft Communication Systems
AERO 112 Aircraft Navigation Systems
AERO 113 Aircraft Radar & Pulse Systems
AERO 150 FAA Special Projects-Airframe Enhancement
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

To obtain the combination Airframe & Powerplant Maintenance Technician certificate or degree, 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

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 1900 hours (four full semesters and one four week summer session) of instruction to complete the combination airframe and 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 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

Recommended Electives :

AERO 110 Instrument Power Distribution & Flight Control Systems
AERO 111 Aircraft Communication Systems
AERO 112 Aircraft Navigation Systems
AERO 113 Aircraft Radar & Pulse Systems
AERO 150 FAA Special Projects-Airframe Enhancement
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

To obtain the combination Airframe & Powerplant Maintenance Technician certificate or degree, 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

Aeronautics

Avionics Technician

Program Description

This program prepares students to work in the Avionics field as a technician skilled in the installation, troubleshooting, removal and repair of all cockpit instruments which includes: airborne communications, navigation, and identification systems; automatic flight control systems; head-up displays; airborne weapons and reconnaissance systems; air traffic control systems, including communications, displays and surveillance systems; ground radar systems, including those for early warning and missile/space tracking; electro-optic, infrared and laser systems; space satellite communication systems; telemetry systems and space vehicle avionics. They will be familiar with the government regulations associated with such equipment and be prepared, if the opportunity presents itself, to open their own business in the field.

Certificate of Achievement and Associate in Science Degree

A Certificate of Achievement can be obtained upon completion of the 28-unit major. The Associate in Science Degree can be obtained by completing a total of 60 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 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 110 Instrument Power Distribution & Flight Control Systems	7
AERO 111 Aircraft Communication Systems	7
AERO 112 Aircraft Navigation Systems	7
AERO 113 Aircraft Radar & Pulse Systems	7
Total Units	28

Aeronautics courses numbered 200 and above are intended as refresher courses and may be used to prepare for FAA licensing. They are not applicable toward the certificate or A.S. Degree in Airframe Maintenance or Powerplant Maintenance and are not covered under Part 147 FAR's or the school FAA certification.

Students with prior experience or schooling must have Solano instructor verification for substitution or waiving. "Proof of Proficiency Exam" may be required prior to enrollment in any class other than 055.

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. 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.*

Aeronautics

- AERO 060** **5.0 Units**
Basic Aeronautical Science
Course Advisory: SCC minimum English and Math Standards. Presents the fundamentals necessary for the advanced study in Aeronautics. Along with an exposure to the history of aviation and powerplant operation, the student will learn ground operation and servicing, mechanic privileges and limitations, maintenance forms, records, and publications, technical mathematics and physics, and how to calculate the weight and balance of an aircraft. Safety is stressed throughout the course. Not available for credit to students who have completed AERO 055 with a "C" or better. *Two and one-half lecture and seven and one-half lab.*
- AERO 062** **5.0 Units**
Aircraft Production Processes
Course Advisory: SCC minimum English and Math Standards. Continues the study of the fundamentals of Aeronautics. The student will learn about the materials used in aircraft construction and maintenance, proper cleaning and corrosion control, and understand aircraft drawings. Safety is stressed throughout the course. Not available for credit to students who have completed AERO 055 with a "C" or better. *Two and one-half lecture hours and seven and one-half lab hours.*
- AERO 064** **5.0 Units**
Aircraft Hydraulics
Course Advisory: SCC minimum English and Math Standards. Presents the study of the fundamentals of Aeronautics. The student will gain an understanding of fluid power systems and the components used to generate and transfer fluid power in aircraft. Safety is stressed throughout the course. Not available for credit to students who have completed AERO 103 with a "C" or better. *Two and one-half lecture hours and seven and one-half lab hours.*
- AERO 066** **5.0 Units**
Basic Aircraft Electrical Systems
Course Advisory: SCC minimum English and Math Standards. Presents the study of the fundamentals of Aeronautics. The student will gain an understanding of electricity, electronics, and the electrical systems used in aircraft. Though primarily oriented toward direct current systems, alternating current and modern electronic circuitry are also included. Safety is stressed throughout the course. Not available for credit to students who have completed AERO 103 with a "C" or better. *Two and one-half lecture hours and seven and one-half lab hours.*
- AERO 102** **10.0 Units**
Airframe Maintenance I
Course Advisory: SCC minimum English standard; AERO 055. Presents the application of fundamental methods, techniques and practices used in aircraft inspection, maintenance and repair. Includes 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; AERO 055. A study of fluid control systems and components with emphasis on design, maintainability, testing and repair. Includes hydraulic fluids, lines and fittings, inspection, checking, servicing and testing of pneumatic and hydraulic systems. Presents theory and application of direct and alternating current as related to air electrical components and systems. *Five hours lecture, fifteen hours lab.*
- AERO 105** **10.0 Units**
Airframe Maintenance II
Course Advisory: SCC minimum English standard. A detailed study of aircraft systems, their fabrication, maintenance, and repair. Includes landing gear, hydraulic, pneumatic, atmosphere control, instruments, communication, navigation, fuel, position, warning, rain and fire protection systems. *Five hours lecture, fifteen hours lab.*
- AERO 106** **10.0 Units**
Powerplant Maintenance I
Course Advisory: SCC minimum English standard; AERO 055. Presents a study of the theory, operation, maintenance and repair of reciprocating engines and accessories. *Five hours lecture, fifteen hours lab.*
- AERO 107** **10.0 Units**
Powerplant Maintenance II
Course Advisory: SCC minimum English standard; AERO 055. Presents a study of the theory, operation, maintenance and repair of the turbine engine and accessories. *Five hours lecture, fifteen hours lab.*
- AERO 110** **7.0 Units**
Instrument Power Distribution & Flight Control System
Prerequisites: ECTN 053 and ECTN 126. A study of basic principles of the electronic systems used on modern aircraft including a review of the principles of flight, aircraft power distribution, basic flight control systems, an introduction to avionics equipment maintenance and repair and Federal Avionics Administration rules, documentation, aircraft drawings and various manufacturers support manuals. Mandatory field and laboratory experience will include typical installation and repair facilities, federal laws governing installation, repair and calibration of equipment used in conjunction with avionics maintenance. *Five hours lecture, six hours lab.*
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Aeronautics

- AERO 111** **7.0 Units**
Aircraft Communication Systems
Prerequisites: ECTRN 053 and ECTRN 126. A study of the basic principles of communication systems used on modern aircraft including information on maintenance levels, FAA and FCC requirements, customer relations, basic RF systems, RF transmitters, antenna systems, related test equipment, documentation, aircraft drawing and various manufacturer's support manuals will be used. Mandatory field and laboratory experience will include typical installation and repair facilities, federal laws governing installation, repair and calibration of equipment used in conjunction with communication systems. *Five hours lecture, six hours lab.*
- AERO 112** **7.0 Units**
Aircraft Navigation Systems
Prerequisites: ECTRN 053 and ECTRN 126. A study of basic principles of the navigation systems used on modern aircraft including the "glass cockpit" and the general theory of navigation systems will be addressed, along with specific investigation into ADF VOR/localizer, glide slope, marker beacon systems, aircraft drawings and various manufacturer's support manuals will be used. Mandatory field and laboratory experience will include typical installations and repairs of each system and the facilities necessary to accomplish the task. Also the student will study the Federal laws governing installation, repair and calibration of equipment used in conjunction with navigation systems. *Five hours lecture, six hours lab.*
- AERO 113** **7.0 Units**
Aircraft Radar & Pulse Systems
Prerequisites: ECTRN 053 and ECTRN 126. A study of the basic principles of the radar and pulse systems used on modern aircraft including the theory of radar and pulse systems, analog MTI systems, analog signal processing FM-CW radar wave propagation targets, and DME and transponder principles. An introduction to radar procedures, aircraft drawings and various manufacturer's support manuals will be used. Mandatory field and laboratory experience will include typical installation and repair facilities, Federal laws governing installation, repair and calibration of equipment used in conjunction with radar and pulse systems. *Five hours lecture, six hours lab.*
- AERO 118** **.5 to 1.5 Units**
FAA Airframe Test Review and Qualification
Course Advisories: SCC minimum English and math standards; AERO 055. To be taken during the final semester of a student's enrollment in the Aviation Program. Consists of a comprehensive oral, practical, and written examination of all material covered in the Airframe Program for the purpose of verifying the student's readiness to pass the Federal Aviation Administration Airframe Examinations. This is an open entry/open exit course. May be repeated to a maximum of 1.5 units, including initial enrollment. *Six to eighteen hours lab* (4 week course).
- AERO 119** **.5 to 1.5 Units**
FAA Powerplant Test Review & Qualification
Course Advisories: SCC minimum English and math standards; AERO 055. To be taken during the final semester of a student's enrollment in the Aviation Program. Consists of a comprehensive oral, practical, and written examination of all material covered in the Powerplant Program for the purpose of verifying the student's readiness to pass the Federal Aviation Administration Powerplant Examinations. This is an open entry/open exit course. May be repeated to a maximum of 1.5 units, including initial enrollment. *Six to eighteen hours lab* (4 week course).
- AERO 150** **.5 to 1.5 Units**
FAA Special Projects and Course Enhancement
Course Advisories: SCC minimum English and Math Standard; 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. This is an open entry/open exit course. May be Repeatable to a maximum of 1.5 units including initial enrollment. *One and one-half to four and one-half hours lab.*
- AERO 151** **.5 to 1.5 Units**
FAA Special Projects - Powerplant 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. Also allows mechanics to take recurrent training. This is an open entry/exit course. Repeatability: Repeatable to a maximum of 3 units including initial enrollment. *One and one-half to four and one-half Lab.*
- AERO 175** **2.0 Units**
Working with Composite Materials
Course Advisory: SCC minimum English and Math Standards. Introduces the student to the manufacturing and maintenance of composite materials in aeronautical and aerodynamic structures. Emphasis is placed on the safe handling of tools and chemicals used in composites. Does not qualify toward FAA licensing for airframe or powerplant mechanics. *One lecture hour and three activities hours.*

Aeronautics

AERO 176

Composite Materials Workshop

Prerequisite(s): AERO 175 with a grade of "C" or better.

Course Advisory: SCC minimum English and Math

Standards. Continues the study of the manufacturing and maintenance of composite materials in aeronautical and aerodynamic structures. Through laboratory practice the student is able to improve their skills to aeronautical quality. Emphasis is placed on the safe handling of tools and chemicals used in composites. Does not qualify toward FAA licensing for airframe or powerplant mechanics. *Three activities hours.*

1.0 Unit

AERO Special Topics

These courses, numbered 098, 148, or 248, 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.

Art

(For Air Conditioning & Refrigeration-See "Industrial Education") (For American Studies- See "Liberal Arts") (For Anthropology-See "Science, General")

Art - Two-Dimensional

Program Description

Students may select from two art programs—Two-Dimensional or Three-Dimensional. 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 or 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 an Associate Degree will be able to:

1. Students will analyze, apply and integrate diverse visual experiences.
2. Students will develop and articulate with proficiency an understanding of visual and multi-cultural literacy.
3. Students will 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

All of the following:

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

All of the following:

ART 004 Life Drawing	2 - 3.5
ART 014 Introduction to Drawing	2 - 3.5

Painting Component Units

One of the following:

ART 016 Beginning Painting	2 - 3.5
ART 017 Acrylic and Oil Painting	2 - 3.5
ART 021 Watercolor	2 - 3.5

2D Emphasis Component Units

One of the following:

ART 005 Life Drawing	2 - 3.5
ART 015 Intermediate Drawing	2 - 3.5
ART 018 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

Three Dimensional Component

One of the following: 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 History Component Units

All of the following:

ART 001 Art History <i>OR</i> ART 002 Art History	3
ART 011 Survey of Modern Art	3
Total Units	26.5 – 34

Recommended Electives

ART 003 World Art
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 Acrylic and Oil Painting
ART 019 Figure Painting
ART 020 Landscape Drawing and Painting— Reflections of Nature
ART 021 Watercolor
ART 022 Watercolor
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 035 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 043 Printmaking: Relief Printing, Including Woodcut
ART 044 Kiln Design and Operation
ART 045 Art Studio Concepts ART 058 Clothed Figure
ART 060 Exhibition Design
ART 061 Collage & Assemblage
ART 100 Color and Mixed Media Drawing
ART 145 Portrait Drawing and Painting
PHOT 030 Beginning Photography

Art - Three-Dimensional

Program Description

Students may select from two art programs—Two-dimensional or Three-Dimensional. These programs are designed to develop visual skills in a variety of art media.

Associate in Arts

The Associate in Arts Degree can be obtained upon completion of 60 units, including the courses in the major for Art—Two-Dimensional or 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 an Associate Degree will be able to:

1. Students will analyze, apply and integrate diverse visual experiences.
2. Students will develop and articulate with proficiency an understanding of visual and multi-cultural literacy.
3. Students will 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

All of the following:

- 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

Ceramics Component Units

One of the following:

- 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

Emphasis Component Units

One of the following:

- 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 035 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 044 Kiln Design and Operation 2 - 3.5

Drawing Component Units

One of the following:

- ART 004 Life Drawing (3.5) 2 - 3.5
- ART 015 Intermediate Drawing (2 or 3.5) 2 - 3.5

Art History Component Units

All of the following:

- ART 001 Art History **OR** Art 002 Art History 3
- ART 011 Survey of Modern Art 3

Professionalism Component Units

One of the following:

- ART 047A Professional Practices for Artists 3
 - ART 047B Art on Site 3
 - ART 046A Portfolio Development – Artistic Inquiry ... 3.5
 - ART 076B Portfolio Development: Documentation ... 3.5
- Total Units 29.5 – 37.5**

Recommended Electives

- ART 003 World Art
- 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 014 Intro to Drawing
- ART 015 Intermediate Drawing
- 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
- PHOT 030 Beginning Photography
- SPCH 001 Intro to Public Speaking

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.

Associate in Arts Degree

The Associate in Arts Degree can be obtained by completing a total of 60 units, including the 28-32.5 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 an Associate Degree will be able to:

1. Students will analyze, apply and integrate diverse visual experiences.
2. Students will develop and articulate with proficiency an understanding of visual and multi-cultural literacy.
3. Students will 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 003 World Art.	3
<i>or</i>	
ART 012 Inside/Outside: The Cultures and Identities of Visual Artists in a Diverse America	3
ART 006 Design Principles in 2-Dimensions.	3.5
<i>or</i>	
ART 007 Design-Color	3.5
<i>or</i>	
ART 008 Design Principles in 3-Dimensions.	3.5
ART 011 Survey of Modern Art	3
ART 014 Introduction to Drawing.	2 - 3.5
<i>or</i>	
ART 023 Introduction to Ceramics: Hand Building.	2 - 3.5
<i>or</i>	
ART 031 Sculpture	2 - 3.5
ART 060 Exhibition Design	3.5
PHOT 035 Art of Photography.	3
<i>or</i>	
CINA 010 The Art of Cinema	3
Electives - Two Courses From Recommended List	4 - 7
Total Units	28 - 32.5

Recommended Electives -

Two courses from Recommended List

ART 003 * World Art
ART 004 Life Drawing
ART 005 Life Drawing
ART 006 Design Principles in 2-Dimensions
ART 007 Design
ART 008 Design Principles in 3-Dimensions
ART 010 Art Appreciation
ART 012 * Inside/Outside: The Cultures and Identities of Visual Artists in a Diverse America
ART 014 Introduction to Drawing
ART 015 Intermediate Drawing
ART 016 Beginning Painting
ART 017 Acrylic and Oil Painting
ART 018 Acrylic and Oil Painting
ART 019 Figure Painting
ART 020 Landscape Drawing and Painting— Reflections of Nature
ART 021 Watercolor
ART 022 Watercolor
ART 023 Introduction to Ceramics: Hand Building
ART 024 Intermediate Ceramics: Hand Building
ART 025 Ceramic Design And Decoration: Hand Building Methods
ART 026 Introduction to Ceramics: Wheel Throwing Techniques
ART 027 Intermediate Ceramics: Wheel Throwing Techniques
ART 028 Ceramic Design: Wheel Throwing Techniques
ART 029 Raku Pottery
ART 031 Sculpture
ART 032 Sculpture: Human Figure
ART 033 Intermediate Sculpture
ART 034 Ceramic Sculpture
ART 035 Wood-Fired Ceramics
ART 037 Clay and Glazes for the Ceramic Artist
ART 038 Introduction to Printmaking
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 044 Kiln Design and Operation

Art

ART 045 Art Studio Concepts
ART 049 Honors
ART 052 Lettering and Layout
ART 054 Illustration I
ART 055 Illustration II
ART 056 Graphic Design I
ART 057 Graphic Design II
ART 058 Clothed Figure
ART 061 Collage & Assemblage
ART 100 Color and Mixed Media Drawing
ART 145 Portrait Drawing and Painting
CINA 010 * The Art of Cinema
CINA 015 Film Production
FREN 001 First Semester French
FREN 002 Second Semester French
FREN 003 Third Semester French
FREN 004 Fourth Semester French
FREN 031 First Semester French, Part 1
FREN 032 First Semester French, Part 2
FREN 033 Second semester French, Part 1
FREN 034 Second Semester French, Part 2

GRMN 001 First Semester German
GRMN 002 Second Semester German
GRMN 003 Third Semester German
GRMN 004 Fourth Semester German
GRMN 031 First Semester German, Part 1
GRMN 032 First Semester German, Part 2
GRMN 033 Second Semester German, Part 1
GRMN 034 Second Semester German, Part 2
HIST 002 World History to 1750
HIST 003 Modern World History
HIST 004 History of Western Civilization to 1500
HIST 005 History of Western Civilization Since 1500
HUMN 002 Humans as Creators: The Media of Creativity
LATN 001 Latin Fundamentals
LATN 002 Latin Fundamentals
LATN 003 Latin Fundamentals
PHIL 031 Introduction to World Religions of the East
PHIL 032 Introduction to World Religions of the West
PHOT 030 Beginning Photography
PHOT 035 Art of Photography

***If not already taken as part of the major**

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 an Associate Degree will be able to:

1. Students will analyze, apply and integrate diverse visual experiences.
2. Students will develop and articulate with proficiency an understanding of visual and multi-cultural literacy.
3. Students will 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 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 003 World Art

ART 041 Etching and Engraving: Color

BUS 181 Business Mathematics

CINA 010 The Art of Cinema

CINA 015 Film Production

DRFT 050 Basic Drafting

DRFT 070 Technical Illustration and Design

ENGL 051 Technical Writing

JOUR 060 Publications Laboratory

MKT 170 Advertising

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

ART 001 Art History <i>Course Advisory: Eligibility for ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ART 006 Design Principles In 2-Dimensions <i>Course Advisory: SCC minimum English standard.</i> 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. <i>Two hours lecture, four and one-half hours lab.</i>	3.5 Units
ART 002 Art History <i>Course Advisory: Eligibility for ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ART 007 Design-Color <i>Course Advisory: SCC minimum English standard.</i> A study of the principles of additive and subtractive 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. <i>Two hours lecture, four and one-half hours lab.</i>	3.5 Units
ART 003 World Art <i>Course Advisories: Eligibility for ENGL 001 and SCC minimum math standard.</i> A cross-cultural exploration of recurrent themes in the art and architecture of the world, emphasizing Non-Western art with selected Western art for comparative study. Field trip may be required. <i>Three hours lecture.</i>	3.0 Units	ART 008 Design Principles In 3-Dimensions <i>Course Advisory: SCC minimum English standard.</i> 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. <i>Two hours lecture, four and one-half hours lab.</i>	3.5 Units
ART 004 Life Drawing <i>Course Advisory: SCC minimum English standard.</i> 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. <i>One to two hours lecture, three to four and one-half hours lab.</i>	2.0 or 3.5 Units	ART 010 Art Appreciation <i>Course Advisory: Eligibility for ENGL 001.</i> A study of the visual elements, materials and techniques used in the creation of art forms, including analysis of art from disparate cultures and periods of history. Includes audio-visual presentations and field trips that focus on the interrelationship of subject, composition, and concept — providing opportunities for deeper appreciation of art's meaning and value. Field trip may be required. <i>Three hours lecture.</i>	3.0 Units
ART 005 Life Drawing <i>Prerequisite: ART 004.</i> 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. Repeatable 1 time. <i>One to two hours lecture, three to four and one-half hours lab.</i>	2.0 or 3.5 Units	ART 011 Survey Of Modern Art <i>Course Advisory: Eligibility for ENGL 001.</i> A study of the major art styles and artists from 1875 to the present. 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. <i>Three hours lecture.</i>	3.0 Units

Art

- ART 012** 3.0 Units
Inside/Outside: The Cultures And Identities Of Visual Artists
Course Advisory: ENGL 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** 2.0 or 3.5 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 will be developed. Field trip may be required. Repeatable 1 time. *One to two hours lecture, three to four and one-half hours lab.*
- ART 015** 2.0 or 3.5 Units
Intermediate Drawing
Course Advisories: 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. *One to two hours lecture, three to four and one-half hours lab.*
- ART 016** 2.0 or 3.5 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. Repeatable 1 time. *One to two hours lecture, three to four and one-half hours lab.*
- ART 017** 2.0 or 3.5 Units
Acrylic and Oil Painting
Course Advisory: SCC minimum English standard. 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. *One to two hours lecture, three to four and one-half hours lab.*
- ART 018** 2.0 or 3.5 Units
Acrylic and Oil Painting
Prerequisite: ART 017. Course Advisory: SCC minimum English and Math standards. A study of color, composition and technique in oil or acrylic painting on an intermediate level. The student may choose to repeat assignments from ART 017 or develop an outline of semester assignments appropriate to his interest and skill needs. Field trip may be required. Repeatable 1 time. *One to two hours lecture, three to four and one-half hours lab.*
- ART 019** 2.0 or 3.5 Units
Figure Painting
Course Advisory: SCC minimum English standard. A study of figure painting techniques. Students work directly from the model to develop skills in rendering and expression. Field trip may be required. Repeatable 1 time. *One to two hours lecture, three to four and one-half hours lab.*
- ART 020** 2.0 or 3.5 Units
Landscape Drawing And Painting—Reflections Of Nature
Course Advisories: 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. Repeatable 3 times. *One to two hours lecture, three to four and one-half hours lab.*
- ART 021** 2.0 or 3.5 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. *One to two hours lecture, three to four and one-half hours lab.*
- ART 022** 2.0 or 3.5 Units
Watercolor
Prerequisite: ART 021. 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. Repeatable 1 time. *One to two hours lecture, three to four and one-half hours lab.*

Art

ART 023 2.0 or 3.5 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, craftsmanship 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. Repeatable 1 time. *One to two hours lecture, three to four and one-half hours lab.*

ART 024 2.0 or 3.5 Units

Intermediate Ceramics: Hand Building

Prerequisite: ART 023. Course Advisory: SCC minimum English standard. Continuation of ART 023 with emphasis on expanding skills, experimentation, design, craftsmanship, and creativity. Application of basic techniques to create finished art forms. Field trip may be required. *One to two hours lecture, three to four and one-half hours lab.*

ART 025 2.0 or 3.5 Units

Ceramic Design And Decoration: Hand Building Methods

Prerequisite: ART 024. Course Advisory: SCC minimum English standard. Emphasizes ceramic design problem-solving. Emphasis on creativity, design, honing skills, craftsmanship 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. *One to two hours lecture, three to four and one-half hours lab.*

ART 026 2.0 or 3.5 Units

Introduction to Ceramics: Wheel Throwing Techniques

Course Advisory: SCC minimum English standard. Introduction to basic wheel throwing techniques. Emphasis on form, craftsmanship, and creativity. Surface techniques include texture, stencil, slip, relief, stain, and glaze. Non-traditional construction and surface techniques will also be covered. Repeatable 1 time. *One to two hours lecture, three to four and one-half hours lab.*

ART 027 2.0 or 3.5 Units

Intermediate Ceramic/Wheel Throwing Techniques

Prerequisite: ART 026. Course Advisory: SCC minimum English standard. Continuation of ART 026 with emphasis on expanding skills, experimentation, design, craftsmanship, and creativity. Application of basic techniques to create finished art forms. Field trip may be required. *One to two hours lecture, three to four and one-half hours lab.*

ART 028 2.0 or 3.5 Units

Ceramic Design: Wheel Throwing Techniques

Prerequisite: ART 027. Course Advisory: SCC minimum English standard. Emphasizes ceramic design problem-solving. Emphasis on creativity, design, honing skills, craftsmanship 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. *One to two hours lecture, three to four and one-half hours lab.*

ART 029 2.0 or 3.5 Units

Raku Pottery

Course Advisory: SCC minimum English standard. ART 23 or ART 26 (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. Repeatable 2 times. *One to two hours lecture, three to four and one-half hours lab.*

ART 030 2.0 or 3.5 Units

Architectural Ceramics, Murals and Tiles

Course Advisory: SCC minimum English standard. ART 23 or ART 26 (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. Repeatable 3 times. *One to two hours lecture, three to four and one-half hours lab.*

ART 031 2.0 or 3.5 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. Field trip may be required. *One to two hours lecture, three to four and one-half hours lab.*

Art

ART 032 **2.0 or 3.5 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. *One to two hours lecture, three to four and one-half hours lab.*

ART 033 **2.0 or 3.5 Units**
Intermediate Sculpture

Prerequisites: ART 031 or ART 032 or ART 034. 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. Repeatable 3 times. *One to two hours lecture, three to four and one-half hours lab.*

ART 034 **2.0 or 3.5 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. Repeatable 2 times. *One to two hours lecture, three to four and one-half hours lab.*

ART 035 **2.0 or 3.5 Units**
Wood-Fired Ceramics

Course Advisories: SCC minimum English and math standards; ART 023 or ART 026 (one college level ceramics course). 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. Course will require participation in wood firing with some time spent outside regularly scheduled class hours. Repeatable 3 times. *One to two hours lecture, three to four and one-half hours lab.*

ART 036 **2.0 or 3.5 Units**
Ceramic Surfaces

Course Advisory: SCC minimum English and Math Standards. ART 023 or ART 026 (one college level ceramics course). 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. Repeatable 3 times. *One to two hours lecture, three to four and one-half hours lab.*

ART 037 **2.0 or 3.5 Units**
Clay and Glazes for the Ceramic Artist

Prerequisite: ART 023 or 026 or equivalent. Course Advisories: 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. Repeatable 2 times. *One to two hours lecture, three to four and one-half hours lab.*

ART 038 **3.5 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 and one-half hours lab.*

ART 039 **2.0 or 3.5 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. *One to two hours lecture, three to four and one-half hours lab.*

ART 040 **2.0 or 3.5 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. *One to two hours lecture, three to four and one-half hours lab.*

Art

ART 041 2.0 or 3.5 Units

Etching and Engraving: Color

Course Advisories: 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. *One to two hours lecture, three to four and one-half hours lab.*

ART 042 2.0 or 3.5 Units

Screen Printing

Course Advisories: 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. Repeatable 3 times. *One to two hours lecture, three to four and one-half hours lab.*

ART 043 2.0 or 3.5 Units

Print Making: Relief Printing, Including Woodcut

Course Advisories: 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. Repeatable 3 times. *One to two hours lecture, three to four and one-half hours lab.*

ART 044 2.0 or 3.5 Units

Kiln Design and Operation

Course Advisory: SCC minimum English and Math Standards. ART 023 or ART 026 (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 trip may be required. Repeatable 3 times. *One to two hours lecture, three to four and one-half hours lab.*

ART 045 2.0 or 3.5 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 trip may be required. Repeatable 3 times. *One to two hours lecture, three to four and one-half hours lab.*

ART 046A 3.5 Units

Portfolio Development - Artistic Inquiry

Course Advisory: SCC minimum English standard. At least 3 courses in designated studio art focus of the semester or instructor consent. 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. Repeatable 3 times. *Two hours lecture, four and one-half hours lab.*

ART 047A 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. Repeatable 2 times. *Three hours lecture.*

Art

- ART 047B** **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. Repeatable 3 times. *Three hours lecture.*
- ART 049** **1.0 to 3.0 Units**
Art Honors
Prerequisites: 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 Division 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. Repeatable 3 times. *Three to nine hours weekly by arrangement.*
- ART 052** **2.0 or 3.5 Units**
Lettering and Layout
Course Advisory: SCC minimum English standard. Basic lettering skills in several media for reproduction and creative lettering. Study of layout and illustration in sign, poster, and advertising design. Recommended for commercial art students and art majors. *One to two hours lecture, three to four and one-half hours lab.*
- ART 054** **3.5 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 and one-half hours lab.*
- ART 055** **3.5 Units**
Illustration II
Prerequisite: ART 054 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. Repeatable 1 time. *Two hours lecture, four and one-half hours lab.*
- ART 056** **3.5 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 and one-half hours lab.*
- ART 057** **3.5 Units**
Graphic Design II
Prerequisite: ART 056. Course Advisories: 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. Repeatable 2 times. *Two hours lecture, four and one-half hours lab.*
- ART 058** **2.0 or 3.5 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. Repeatable 1 time. *One to two hours lecture, three to four and one-half hours lab.*
- ART 060** **3.5 Units**
Exhibition Design
Course Advisory: Eligibility for ENGL 1. Provides fundamentals of designing exhibitions in galleries, museum, and alternative spaces. Students will gain hands-on experience managing all aspects of the Solano Art Gallery. 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. Repeatable 2 times. *Two hours lecture, four and one-half hours lab.*
- ART 061** **2.0 or 3.5 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. Repeatable 1 time. *One to two hours lecture, three to four and one-half hours lab.*

Art

ART 064 **3.5 Units**
Monotype/Monoprint

Course Advisories: 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. Repeatable 2 times. *Two hours lecture, four and one-half hours lab.*

ART 065 **3.5 Units**
Book Making

Course Advisories: 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. Repeatable 2 times. *Two hours lecture, four and one-half hours lab.*

ART 076B **3.5 Units**
Book Making

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. Repeatable 3 times. *Two hours lecture, four and one-half hours lab.*

ART 100 **2.0 or 3.5 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. Repeatable 1 time. *One to two hours lecture, three to four and one-half hours lab.*

ART 145 **2.0 or 3.5 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. Repeatable 1 time. *One to two hours lecture, three to four and one-half hours lab.*

ART Special Topics

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.

Automotive

(For Astronomy-See "Science, General") (For Athletics-See "Physical Education") (For Avionics Technician-See "Aeronautics")

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 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

Recommended Electives

BUS 005 Introduction to Business
DRFT 079 Blueprint Reading
IT 110 Modern Welding
IT 160 Electrical Fundamentals
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

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 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
ECTN 101 Introduction to Electricity and Electronics
IT 110 Modern Welding
IT 140 Industrial Materials
IT 150 Industrial Processes
IT 160 Electrical Fundamentals
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

Automotive

AUTB 100 10.0 Units

Fundamentals 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

Prerequisites: 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

Prerequisites: AUTB 103. Advanced projects undertaken by students in their field of specialization, under supervision of the instructor. Repeatable 1 time. *Two hours lecture, three hours lab.*

AUTB Special Topics

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.

Automotive Technician

ATEC 070 3.0 Units

Automotive Fundamentals

Course Advisories: SCC minimum English and math standards. The study of automotive fundamentals including hazardous waste handling, automotive safety, automotive careers, automotive information systems, tools and equipment, fasteners, automotive measurements and measuring devices, bearings and sealants, engine systems and operation, drivelines, suspension and steering, brakes, and auxiliary systems. *Two hours lecture, three hours lab.*

ATEC 130 10.0 Units

Automotive Systems

Course Advisory: SCC minimum English standard. A study of the theory and practice of automotive repair, maintenance and diagnosis including safety, hand and power tools, test equipment and service, and design principles of all automotive systems. A broad overview providing the knowledge and skills necessary to meet the specific requirements of ATEC 131, 132, and 133. Testing and manipulative skills based on industry standards. *Five hours lecture, fifteen hours lab.*

ATEC 131 10.0 Units

Automotive Electrical Systems

Prerequisite: ATEC 130. Course Advisory: SCC minimum English standard. Presents the theory and repair of automotive electrical systems. Includes the study of electricity principles, conventional and electronic ignition systems, charging systems, starting systems and electrical accessories. Provides the student with knowledge and skills in systems diagnosis, repair and testing necessary for entry into the trade. Testing and manipulative skills based on industry standards. *Five hours lecture, fifteen hours lab.*

ATEC 132 10.0 Units

Automotive Brakes and Suspension Systems

Prerequisite: ATEC 131. Course Advisory: SCC minimum English standard. Study of automotive brakes, suspension systems, and wheel alignment theory and service procedures. Includes skills development in the use of wheel alignment machines and brake reconditioning equipment. Provides the student with knowledge and skills in diagnosis repair and testing necessary for entry into the trade. Testing and manipulative skills based on industry standards. *Five hours lecture, fifteen hours lab.*

ATEC 133 10.0 Units

Internal Combustion Engines and Power Transmission

Prerequisite: ATEC 132. Course Advisory: SCC minimum English standard. A study of internal combustion engines, transmissions, differentials, and support systems. Provides the student with the knowledge and skills in engine and power transmission theory and overhaul procedures necessary for entry into the trade. Testing and manipulative skills based on industry standards. *Five hours lecture, fifteen hours lab.*

Banking and Finance

Bank Operations

Program Description

"Banking is more people than figures. It's helping people with their problems. People tell us everything because we are in a position of trust." (Jean Adamson, U. S. Assistant Treasurer) The banking and finance program is offered by the College in cooperation with the American Institute of Banking.

Certificate of Achievement and Associate in Science Degree

A Certificate of Achievement can be obtained upon completion of the 21-unit major. 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 Certificate of Achievement/Associate Degree will be able to:

1. Identify accounting concepts that enable them to interpret financial data and use it to make informed decisions about the operating performance and financial position of a company.
2. Describe personal financial investment concepts that enable them to provide customers with advice on investments, insurance, and estate planning.
3. Use communication skills that will enable them to assume supervisory positions.
4. Demonstrate an understanding of the monetary and banking issues that are pervasive in all aspects of financial services.

Required Courses	Units
BIF 150 Principles of Bank Operations	3
BUS 018 Legal Environment of Business	3
BUS 181 Business Mathematics	3
CIS 050 Microcomputer Applications	3
MGMT 191 Human Relations	3
SPCH 001 Introduction to Public Speaking	3
or	
SPCH 060 Business and Professional Communication	3
Elective(s) selected from the recommended electives	3
Total Units	21

Recommended Electives

CIS 055 MS Windows Operating Systems
CIS 073 Microsoft Excel
CIS 060 Introduction to the Internet
OCED 090 Occupational Work Experience
OCED 091 General Work Experience
OT 054 Beginning Keyboarding
OT 055 Intermediate Keyboarding/Word Processing
OT 100 Skill Building on the Computer Keyboard
OT 159 Filing and Records Management
OT 162 Ten-Key

BIF 150 **3.0 Units**
Principals of Bank Operations
Course Advisory: SCC minimum English standard. A
comprehensive study and analysis of the economic functions of banks and the services they render to society. *Three hours lecture.*

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 44-46 unit major, the general education requirements, and electives for a total of 64-66 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 an Associate Degree will be able to:

1. Students will be able to design and/or interpret and 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 003 Evolution, Ecology & Biodiversity 5

BIO 002 Principles of Cell and Molecular Biology 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 4

and

MATH 021 Analytic Geometry and Calculus II 4

PHYS 002 General Physics (Non-calculus) 4

and

PHYS 004 General Physics (Non-calculus) 4

or

PHYS 006 Physics for Science and Engineering 4

and

PHYS 007 Physics for Science and Engineering 4

Total Units 44 – 46

BIO 002 5.0 Units

Principles of Cell and Molecular Biology

Prerequisite: CHEM 001 Course Advisory: Eligibility for ENGL 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 ENGL 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. Field trips may be required. Some field trips may involve a fee. *Three hours lecture, six hours lab.* (Formerly BIO 001)

BIO 004 5.0 Units

Human Anatomy

Course Advisory: SCC minimum Math standard, Eligibility for ENGL 001, 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. (BIO 004 formerly was called BIO 006.) *Three hours lecture, six hours lab.*

BIO 005 5.0 Units

Introductory Physiology

Prerequisite(s): A grade of "C" or better in BIO 004 and CHEM 001 or CHEM 010 or CHEM 051 Course Advisory: SCC minimum Math standard and Eligibility for ENGL 001. This course describes physiological and homeostatic mechanisms of the body systems in health and dysfunctional states. 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.*

Biology

BIO 012 Environmental Science <i>Course Advisories: Eligibility for ENGL 001 and SCC minimum math standard.</i> 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. <i>Three hours lecture.</i>	3.0 Units	BIO 018 Biology Of Sex <i>Course Advisory: SCC minimum Math standard, Eligibility for ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units
BIO 012L Environmental Science Laboratory <i>Prerequisite: BIO 012 (may be taken concurrently) Course Advisories: Eligibility for ENGL 001 and SCC minimum math standard.</i> 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. <i>Three hours lab.</i>	1.5 Units	BIO 019 Marine Biology <i>Course Advisories: Eligibility for ENGL 001 and SCC minimum math standard.</i> 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 Biological Science 001 or 002. <i>Three hours lecture, three hours lab.</i>	4.0 Units
BIO 014 Principles of Microbiology <i>Prerequisite: A grade of "C" or better in Chem 51, Chem 10, or Chem 1 and a grade of "C" or better in Math 104 or Math 114 or two years of high school algebra. Course Advisories: SCC minimum English and Math standards.</i> 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. <i>Three hours lecture, three hours lab.</i>	4.0 Units	BIO 047 Independent Study <i>Prerequisite: A grade of "C" or better in 12 units of credit, including 4 units from within the discipline. Course Advisories: Eligibility for ENGL 001; statistics may be useful for data analysis.</i> Designed for students who intend to major in biological sciences or pre-professional programs. May be repeated to a maximum of 3 units, including initial enrollment. <i>One and one-half to nine hours weekly by arrangement.</i>	.5 Unit
BIO 015 Introduction to Biology <i>Prerequisite: None. Course Advisories: Eligibility for ENGL 001; SCC minimum math standard.</i> 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. <i>Three hours lecture, three hours lab weekly.</i>	4.0 Units	BIO 049 Biology Honors <i>Prerequisites: 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 Math-Science Division. Course Advisory: Eligibility for ENGL 001. Requires students to complete an independent student project under the supervision of a member of the faculty.</i> 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. <i>Three to nine hours weekly by arrangement.</i>	1.0 to 3.0 Unit
BIO 016 Introduction to Human Biology <i>Prerequisite: None. NOTE: Not open for credit to students who have completed BIO 001, 002, 005, 010 or 015. Course Advisories: SCC minimum English and math standards.</i> 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. <i>Three hours lecture.</i>	3.0 Units		

Biology

BIO 099

.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 the discipline with a grade of "B" or better; an ability to work independently; permission of the Division 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. May be repeated to a maximum of 6 units, including initial enrollment. *one and one-half to six hours weekly by arrangement.*

BIO 160

2.0 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. This course provides a review of select anatomy, physiology, chemistry, nutrition, microbiology, and mathematics topics for students entering nursing school. This course is especially designed for students that have had an extended time period between finishing their pre-nursing requirements and entering nursing school. (Same as MATH 160) Pass / No Pass Class. *Eight hours lecture.* (4 week course)

BIO Special Topics

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.

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 Certificate of Achievement/Associate Degree will be able to:

1. A successful student should 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. In preparation to working at a biotechnology company, a successful student should be able to 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
<i>or</i>	
BIO 002 Principles of Cell and Molecular Biology	5
CHEM 010 Intermediate Chemistry	4
<i>or</i>	
CHEM 001 General Chemistry	5
Total Units	22 – 24

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

Applied Biotechnology

Certificate of Achievement and Associate in Science Degree

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 Certificate of Achievement/Associate Degree will be able to:

1. Successfully enter the job market in the biotechnology industry

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.

Biotechnology

BIOT 051 **3.0 Units**

Principles of Biotechnology

Prerequisite: BIO 014 or BIO 002 or BIOT 160. *Course Advisories:* SCC minimum Math standard and Eligibility for ENGL 001. 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 Advisories: Eligibility for ENGL 001; 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.*

BIOT 062 **4.0 Units**

Cell Culture And Protein Recovery

Prerequisites: BIOSC 014 or BIOSC 002 or BIOTCH 160. *Course Advisory:* Eligibility for ENGL 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 and six hours lab weekly.*

BIOT 063 **4.0 Units**

Biotechnology Instrumentation: Quality Control & Genetic Engineering

Prerequisite: BIO 014 or BIO 002 or BIOT 160. *Course Advisory:* Eligibility for ENGL 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 and six hours lab weekly.*

BIOT 160 **4.0 Units**

Basic Concepts/Methods in Biotechnology

Prerequisites: MATH 104 or MATH 114 or equivalent. *Course Advisory:* SCC minimum English and math standards. *NOTE: Not open to students who have completed CHEM 001, CHEM 010, BIO 002, BIO 014, or equivalent.* 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, 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 and Associate in Science Degree

A Certificate of Achievement can be obtained by completing the 26-unit major with a grade of "C" or better in each course. 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 Certificate of Achievement/Associate Degree 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
<i>or</i>	
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

BUS 092 Business Communication
CIS 020 Assembly Programming
CIS 022 Introduction to Programming
CIS 023 Data Structures and Algorithms
CIS 025 FORTRAN Programming
MATH 011 Elementary Statistics
MATH 020 Analytic Geometry and Calculus I
MATH 021 Analytic Geometry and Calculus II
MATH 030 Analytic Geometry and Calculus
MATH 031 Analytic Geometry and Calculus
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

***Suggested general education math courses for the Business, General (Transfer) major are MATH 011 (Statistics) and MATH 015 (Finite Math) OR MATH 030 (Analytical Geometry and Calculus). Students should consult a counselor regarding Business Articulation Agreements**

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 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. What are 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 092 Business Communication	3
BUS 005 Introduction to Business	3
BUS 018 Legal Environment of Business	3
CIS 050 Microcomputer Applications	3
CIS 073 Microsoft Excel	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
OCED 090 Occupational Work Experience	1
Total Units	31

Recommended Electives

- MKT 171 Introduction to Marketing
- MKT 173 Principles of Selling

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

BUS 005 Introduction To Business <i>Course Advisories: Eligibility for ENGL 001, SCC minimum math standard.</i> 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. <i>Three hours lecture.</i>	3.0 Units	BUS 072 Personal Insurance <i>Course Advisories: Eligibility for English 001, SCC minimum math standard.</i> 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. <i>Three hours lecture.</i>	3.0 Units
BUS 018 Legal Environment Of Business <i>Course Advisories: Eligibility for ENGL 001, SCC minimum math standard.</i> A comprehensive introduction to the study of the law, with specific emphasis on the legal environment of business. Includes the legal process, legal institutions, contracts, agency, the Uniform Commercial Code (UCC), torts, employment, property, computer law, consumer protection, government regulation and Alternative Dispute Resolution (ADR), along with ethical concerns and current public policy issues. Written examinations required. <i>Three hours lecture.</i>	3.0 Units	BUS 073 Commercial Insurance <i>Course Advisories: Eligibility for English 001, SCC minimum math standard.</i> 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. <i>Three hours lecture.</i>	3.0 Units
BUS 060 Introduction To International Business <i>Course Advisories: Eligibility for English 001, SCC minimum math standard.</i> 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. <i>Three hours lecture.</i>	3.0 Units	BUS 074 Insurance-Code & Ethics <i>Course Advisories: Eligibility for English 001, SCC minimum math standard.</i> 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. <i>Three hours lecture.</i> (6 week course).	1.0 Unit
BUS 070 Introduction To Insurance <i>Course Advisories: Eligibility for English 001, SCC minimum math standard.</i> 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. <i>Three hours lecture.</i> (6 week course).	1.0 Unit	BUS 092 Business Communication <i>Course Advisories: Eligibility for ENGL 001; SCC minimum math standard.</i> 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. <i>Three hours lecture.</i>	3.0 Units
BUS 071 Principles Of Property And Liability Insurance <i>Course Advisories: Eligibility for English 001, SCC minimum math standard.</i> 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. <i>Three hours lecture.</i>	3.0 Units	BUS 099 Business Honors <i>Prerequisites: 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 Division Dean based on instructor availability.</i> A comprehensive study and analysis of a topic of student scholarship which is centered on important topics or issues within the business field. May be repeated to a maximum of 6 units, including initial enrollment. <i>Three to nine hours weekly by arrangement.</i>	1.0 to 3.0 Units

Business

BUS 100 Work Readiness <i>Course Advisories: SCC minimum English and math standards.</i> 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. <i>Three hours lecture</i> (8 week course).	1.5 Units	BUS 182 Small Business Mathematics <i>Course Advisories: SCC minimum English and math standards.</i> 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. Open Entry/Open Exit Course, Online Course is not Open Entry/Open Exit. <i>One hour lecture.</i>	1.0 Unit
BUS 119 Project Management <i>Prerequisites: CIS 001 or CIS 050 and BUS 005. Course Advisories: ECON 002, ACCT 002, CIS 091, BUS 092; SCC minimum English and math standards.</i> Integrates business concepts used in managing a development or business project such as the project's scope and goals, management of communication, cost and time management, and human resources together with using project management computer software designed for these tasks. Students will manage case studies using their understanding of business and using the software. (Same as CIS 119) <i>Three hours lecture, one hour lab weekly by arrangement.</i>	3.0 Units	BUS 191 Investment Fundamentals <i>Course Advisory: SCC minimum English standard.</i> A comprehensive study and analysis of investment strategies available to investors. Topics covered include the stock and bond market, gold, money markets and options. <i>Three hours lecture.</i>	3.0 Units
BUS 148A Small Business Project-Based Path for Entrepreneurs <i>Course Advisory: SCC minimum English and Math standards.</i> 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. <i>Three hours lecture.</i>	3.0 Units	BUS 201 Starting And Managing A Small Business Presents an overview of the process and steps involved in establishing a small business. Topics include entrepreneurial characteristics, success and failure factors, financing, management and business concerns, and developing a check list for planning a start-up. This is a credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit
BUS 181 Business Mathematics <i>Course Advisory: SCC minimum English standard.</i> 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. Open Entry/Open Exit, Variable unit course, Online course is not Open Entry/Open Exit. Repeatable to a maximum of 3 units. <i>One to three hour(s) lecture.</i>	1.0 Unit	BUS 202 Financing A Small Business Examines various sources of money to start, buy, or expand a small business, including the many ways to start, buy, or expand a business with little or no money. This is a credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit
		BUS 203 Business Financial Management Examines the preparation and analysis of financial statements and basic small business accounting techniques, using manual and/or computer systems. This is a credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit
		BUS 204 Managing Credit And Collections Examines the functions of credit and collections, how to establish a credit policy and collections procedures, and how to avoid legal problems. This is a credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit
		BUS 205 Business Budgeting Examines the use of budgeting techniques as an aid to making informed business decisions. Budgeting enables small business owners to reduce risk and increase the probability of success. This is a credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit

Business

BUS 206 Planning For Sales And Profit Examines various business strategies that enable a small business to grow rapidly in size and profitability. This is a credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit	BUS 210 Record Keeping For Small Business Examines the legal, tax, and other reasons for keeping business documents, what kinds should be kept, and how to create them. The use of various manual and computer systems is explored. This is a credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit
BUS 207 Recruiting And Selecting Employees Explores the process of identifying human resource needs and the process of recruiting and selecting the right person. This is a credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit	BUS 211 Marketing And Advertising Covers the process of determining what customers want to buy and how to sell products and services to them. This is a credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit
BUS 208 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 credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit	BUS 212 Risk Management And Insurance Focuses on the risks associated with owning a small business and how to reduce them. Explores the different types of insurance available. This is a credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit
BUS 209 Establishing A Home-Based Business Presents the basic fundamentals and considerations involving the use of a private residence as the primary location of a small business. Topics include the advantages and disadvantages of home-based operations; licensing, zoning and use permits; legal and liability considerations, specific state and federal tax compliance; employing family members; and the business use of personal assets. This is a credit/no-credit only course. <i>Eight hours lecture total.</i> (Two-week course)	.5 Unit	BUS Special Topics 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.	

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 26-29 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 an Associate Degree will be able to:

1. Interpret and analyze chemical data
2. Apply chemical bonding knowledge to structural analysis
3. 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
<i>and</i>	
CHEM 002 General Chemistry	5
CHEM 003 Organic Chemistry I	5
<i>and</i>	
CHEM 004 Organic Chemistry II	5
BIO (any course except 048 or 098)	3 - 5
PHYS 002 General Physics (Non-calculus)	4
<i>or</i>	
PHYS 006 Physics for Science and Engineering	4
<i>or</i>	
PHYS 010 Descriptive Physics	3
Total Units	26 – 29

CHEM 001

5.0 Units

General Chemistry

Prerequisite: A grade of "C" or better in any of the following: MATH 104 or two years of high school algebra AND a grade of "C" or better in one of the following: CHEM 160 OR one year of high school chemistry. Course Advisories: Eligibility for ENGL 001 and CHEM 10 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 grade of "C" or better. Course Advisory: Eligibility for ENGL 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 grade of "C" or better.
Course Advisory: ENGL 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 grade of "C" or better.
Course Advisory: Eligibility for ENGL 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
Prerequisites: A grade of "C" or better in CHEM 160 or two semesters of high school chemistry, and a grade of "C" or better in MATH 104 or MATH 114 or two years of high school algebra. *NOTE: Not open for credit to students who have completed CHEM 001. Course Advisory:* Eligibility for ENGL 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(s): CHEM 010 or CHEM 001 with a grade of "C" or better. *Course Advisory:* Eligibility for ENGL 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(s): A grade of "C" or better in Chem 160 or two semesters of high school chemistry, and a grade of "C" or better in MATH 104 or MATH 114 or the equivalent or two years of high school algebra. *Course Advisory:* Eligibility for ENGL 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. *NOTE: Not open for credit to students who have completed CHEM 011. This course is not a prerequisite for any chemistry course. Field trip may be required. Online homework may be required. Three hours lecture, three hours lab.*
- CHEM 097** **1.0 Unit**
Special Projects
Prerequisite: CHEM 002 with a grade of "C" or better. An independent laboratory project designed to increase a student's laboratory and reporting skills. Completion of chemical analyses and a written report are required. May be repeated to a maximum of 6 units, including initial enrollment. *Three to nine hours weekly by arrangement.*
- CHEM 098**
Special Topics
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 grade of "C" or better in any of the following: MATH 104 or MATH 114 or two years of high school algebra. *NOTE: Not open to students who have completed CHEM 001, CHEM 010, or equivalent. 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. *Three hours lecture, three hours lab.*
- CHEM Special Topics**
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.

Communication Studies

Program Description

This program is a broad based program concerned with the preparation and delivery of messages in interpersonal, public and mediated 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, Communications Consultant, Lawyer, Minister, Personnel Director, Television Director or Producer, Broadcast Journalist, Public Relations, Political Campaign Aide, Sales, Counselor.

Associate in Arts Degree

The Associate in Arts degree can be obtained upon completion of 60 units, including the 18-unit 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 an Associate 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 multiple contexts.
4. Communicate utilizing a variety of performance methods.

Required Courses	Units
SPCH 001 Introduction to Public Speaking	3
SPCH 006 Argumentation and Debate	3
SPCH 010 Interpersonal Communication	3
SPCH 015 Oral Interpretation of Literature	3
SPCH 060 Business and Professional Communication	3
TV 050 Survey of Broadcasting	3
Total Units	18

Recommended Electives

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
PSYC 001 Introduction to Psychology
SPCH 002 Fundamentals of Persuasive Speaking
SPCH 050 Forensics/Speech Workshop
THEA 001 Principles and Theory of Acting
TV 055 Beginning Television Production

SPCH 001 **3.0 Units**
Introduction to Public Speaking
Course Advisory: Eligibility for ENGL 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; and to critically analyze public speeches of various types. *Three hours lecture.*

SPCH 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. *Three hours lecture.*

SPCH 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. *Three hours lecture.*

SPCH 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. *Three hours lecture.*

Communication Studies

SPCH 010 Interpersonal Communications <i>Course Advisory: Eligibility for ENGL 001.</i> Communication principles as applied to different interpersonal communication situations including verbal and non-verbal communication, listening, overcoming barriers to communication, and conflict resolution. <i>Three hours lecture.</i>	3.0 Units	SPCH 050 Forensics/Speech Workshop <i>Course Advisory: Eligibility for ENGL 001.</i> 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. Open entry/exit. Repeatable 3 times. <i>One hour lecture and zero to nine hours lab.</i>	1.0 to 4.0 Units
SPCH 012 Intercultural Communication <i>Course Advisory: SCC minimum English standard.</i> 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. <i>Three hours lecture.</i>	3.0 Units	SPCH 060 Business and Professional Communication <i>Course Advisory: Eligibility for ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units
SPCH 015 Oral Interpretation of Literature <i>Course Advisory: SCC minimum English standard.</i> Study of literature through oral performance which 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. <i>Three hours lecture.</i>	3.0 Units	SPCH 075 Sports Broadcasting <i>Course Advisories: SCC minimum Math standard; eligibility for ENGL 001; Speech 001.</i> A professional approach to the basics of on-air and internet sports broadcasting. Areas of concentration include performance training for play-by-play description, color commentary, compiling and organizing statistical data for a variety of sporting events. 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. Students will be required to attend weekly athletic competitions. <i>One hours lecture, 2 hours activity, 3 hours by arrangement weekly.</i>	3.0 Units
SPCH 049 Speech Honors <i>Prerequisites: Completion of 30 or more units of transferable college credit including 6 units of transferable speech; ENGL 001 with a grade of B or better; an ability to work independently; and permission of the Division Dean based on instructor availability.</i> 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. <i>Three to nine hours weekly by arrangement.</i>	1.0 to 3.0 Units		

Computer and 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 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

Recommended Electives

CIS 025 FORTRAN Programming
CIS 035 Introduction to Java Programming
CIS 060 Introduction to the Internet
CIS 061 Creating Web Pages
CIS 063 WordPerfect
CIS 066 Microsoft Word
CIS 068 Object Oriented Game Programming with Flash
CIS 073 Microsoft Excel
CIS 080 SQL Database Management Systems
CIS 108 Fast Track WordPerfect
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

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.

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

Recommended Electives

CIS 020 Assembly Programming
CIS 022 Introduction to Programming
CIS 025 FORTRAN 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
CIS 108 Fast Track WordPerfect
ACCT 001 Principles of Accounting – Financial
ACCT 002 Principles of Accounting - Managerial
BUS 005 Introduction to Business
ECTN 158 Microcomputer Maintenance
OCED 090 Occupational Work Experience
OCED 091 General Work Experience

Computer and 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 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
CIS 022 Introduction to Programming
CIS 023 Data Structures and Algorithms
CIS 035 Introduction to Java Programming
CIS 068 Object Oriented Game Programming with Flash
CIS 078 Access -Database Management System
CIS 108 Fast Track WordPerfect
CIS 120 Developing XML Web Services
CIS 121 PHP Programming with MySQL

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

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

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 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 073 Microsoft Excel	3
CIS 066 Microsoft Word	3
or	
CIS 063 WordPerfect	3
CIS 078 Access -Database Management System	3
Total Units	10.5

Computer and Information Science

Home-Based Computer Processor 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 073 Microsoft Excel	3
CIS 066 Microsoft Word	3
<i>or</i>	
CIS 063 WordPerfect	3
OT 100 Skill Building on the Computer Keyboard	1
BUS 201 Starting and Managing a Small Business	0.5
BUS 210 Record Keeping for Small Business	0.5
BUS 209 Establishing a Home-Based Business	0.5
Total Units	10

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

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 075 Client-Side Web Programming	3
CIS 081 Server-Side Web Programming	3
CIS 068 Object Oriented Game Programming with Flash	3
Total Units	15

<p>CIS 001 3.0 Units</p> <p>Introduction To Computer Science <i>Course Advisories: SCC minimum English and math standards; keyboarding 30 wpm.</i> An introduction to the hardware and software components of basic computer systems. 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. <i>Three hours lecture, one hour lab weekly by arrangement.</i></p>	<p>CIS 015 3.0 Units</p> <p>Programming In Visual Basic.NET <i>Course Advisories: CIS 001 with a grade of "C" or "CR" or better; SCC minimum English and math standards.</i> 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. <i>Three hours lecture, one hour lab weekly by arrangement.</i></p>
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Computer and Information Science

CIS 020 **3.0 Units**
Assembly Programming
Prerequisites: CIS 010 or 015 or 022 or 035 with a grade of "C" or "CR" or better. Course Advisories: 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 weekly by arrangement.*

CIS 022 **3.0 Units**
Introduction to Programming
Prerequisites: CIS 001 with a grade of "C" or "CR" or better. Course Advisories: 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 weekly by arrangement.*

CIS 023 **3.0 Units**
Data Structures And Algorithms
Prerequisites: CIS 22 with a grade of "C" or "CR" or better. Course Advisories: 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.) *Three hours lecture, one hour lab weekly by arrangement.*

CIS 025 **3.0 Units**
FORTRAN Programming
Prerequisite: CIS 001 with a grade of "C" or "CR" or better. An introduction to the FORTRAN programming language. Students will learn to code, compile, test, and debug simple programs in the areas of mathematics, science, and business. Topics will include use of subprograms, file processing, multi-dimensional arrays, and structured programming concepts for selection and iteration techniques. *Three hours lecture, one hour lab weekly by arrangement.*

CIS 035 **3.0 Units**
Introduction to Java Programming
Prerequisites: CIS 022 or CIS 023 or 015 with a grade of "C" or better. Course Advisories: SCC minimum English and math standards. The course introduces Object Oriented Programming (OOP) using the Java programming language. It includes 'hands-on' development of Java applets and Java applications using objects, classes, interfaces and Graphical User Interface (GUI) components. *Three hours lecture, one hour lab weekly by arrangement.*

CIS 049 **1.0 to 3.0 Units**
Computer Programming Honors
Prerequisites: 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 Division Dean based on instructor availability. Course Advisories: 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. May be repeated to a maximum of 6 units, including initial enrollment. *Three to nine hours weekly by arrangement.*

CIS 050 **3.0 Units**
Microcomputer Applications
Course Advisories: Basic keyboarding skills at 30 wpm; SCC minimum English and math standards. NOTE: Not open to students who have received credit in CIS 001. 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, one hour lab weekly by arrangement.*

CIS 052 **3.0 Units**
UNIX Operating System
Course Advisories: CIS 055 with a grade of "C" or "CR" or better; 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, one hour lab weekly by arrangement.*

Computer and Information Science

CIS 055 MS Windows Operating Systems <i>Course Advisories: CIS 001 with a grade of "C" or "CR" or better; basic keyboarding skills.</i> 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. <i>Three hours lecture, one hour lab weekly by arrangement.</i>	3.0 Units	CIS 062 Creating Web Interactivity with Flash <i>Course Advisories: CIS 001 with a grade of "C" or "CR" or better; CIS 061 with a grade of 'C' or 'CR' or better ; SCC minimum English and math standards.</i> 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. <i>Three hours lecture, one hour lab weekly by arrangement.</i>	3.0 Units
CIS 057 Introduction To Microsoft Windows <i>Course Advisories: CIS 001 with a grade of "C" or "CR" or better; ability to keyboard at 30 wpm.</i> Designed to familiarize students with the major features of the Microsoft Windows operating systems file management using My Computer, Explorer, Find; customizing the system using control panel; using accessories such as Paintbrush, Wordpad, Notepad, Calculator; and using other advanced features including OLE (object linking and embedding); backing up and maintaining the system, and the MS Windows Registry. <i>Three hours lecture, one hour lab weekly by arrangement.</i> (8 week course).	1.5 Units	CIS 063 Wordperfect <i>Course Advisories: CIS 001 with a grade of "C" or "CR" or better; ability to keyboard at 30 wpm.</i> Provides a thorough study of the WordPerfect word processing program. Students will use basic functions to create business documents as well as advanced features such as macros, mail merge, sorting, graphics, charts, columns, outlining, and styles. <i>Three hours lecture, one hour lab weekly by arrangement.</i>	3.0 Units
CIS 060 Introduction to the Internet <i>Course Advisories: SCC minimum English and math standards.</i> 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. <i>Three hours lecture, one hour lab weekly by arrangement.</i> (8 week course).	1.5 Units	CIS 066 Microsoft Word <i>Course Advisories: CIS 001 or CIS 050 with a grade of "C" or "CR" or better; ability to keyboard at 30 wpm.</i> 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. <i>Three hours lecture, one hour lab weekly by arrangement.</i>	3.0 Units
CIS 061 Creating Web Pages <i>Course Advisories: CIS 001; SCC minimum English and math standards.</i> 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. Repeatable 3 times. NOTE: Repeatable for different HTML browsers, i.e. FrontPage, Dreamweaver, etc. <i>Three hours lecture, one hour lab weekly by arrangement.</i>	3.0 Units	CIS 068 Object Oriented Game Programming With Flash <i>Prerequisite: CIS 062 with a grade of 'C' or better. Course Advisories: CIS 001 with a grade of "C" or "CR" or better; SCC minimum English and math standards.</i> 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. <i>Three hours lecture, one hour lab weekly by arrangement.</i>	3.0 Units

Computer and Information Science

CIS 069 3.0 Units

Multimedia For The Web

Course Advisories: CIS 001 with a grade of 'C' or better; CIS 061 with a grade of 'C' or better; 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, one hour lab weekly by arrangement.*

CIS 070 3.0 Units

Adobe Photoshop for the Web

Course Advisories: SCC minimum English and Math Standards CIS 001 or CIS 050 with a grade of Pass or No 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. Repeatability: None. The course may be taken up to three times for credit if the software version has changed. *Three hours lecture, one hour lab.*

CIS 072 1.5 Units

Extensible Markup Language (Xml)

Course Advisories: CIS 001 with a grade of 'C' or better; CIS 061 with a grade of 'C' or better; 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, one hour lab weekly by arrangement (8 week course).*

CIS 073 3.0 Units

Microsoft Excel

Course Advisories: CIS 001 with a grade of 'C' or 'CR' or better; 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, one hour lab weekly by arrangement.*

CIS 075 3.0 Units

Client-Side Web Programming

Course Advisories: CIS 001 with a grade of 'C' or better; CIS 061 with a grade of 'C' or better; 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, one hour lab weekly by arrangement.*

CIS 078 3.0 Units

Database Management Systems

Course Advisories: CIS 001 with a grade of 'C' or 'CR' or better. An introduction to relational database management using microcomputers. Microsoft'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, one hour lab weekly by arrangement.*

CIS 080 3.0 Units

SQL Database Management Systems

Prerequisite: A grade of "C" or better in CIS 078 or equivalent. Course Advisories: 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, one hour lab weekly by arrangement.*

CIS 081 3.0 Units

Server-Side Web Programming

Course Advisories: CIS 001 with a grade of 'C' or better; CIS 061 with a grade of 'C' or better; 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, one hour lab weekly by arrangement.*

CIS 083 3.0 Units

Web Server Administration

Course Advisories: CIS 001 with a grade of 'C' or better; CIS 061 with a grade of 'C' or better; 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, one hour lab weekly by arrangement.*

Computer and Information Science

CIS 085 Digital Publishing with InDesign <i>Course Advisories: SCC minimum English and Math Standards CIS 001 or CIS 050 with a grade of Pass or No Pass or better or equivalent.</i> 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. Repeatability: None. The course may be taken up to three times for credit if the software version has changed. <i>Three hours lecture and one hour lab.</i>	3.0 Units	CIS 093 Ms Publisher <i>Course Advisories: CIS 001 or CIS 050 with a grade of 'C' or 'CR' or better; SCC minimum English and math standards.</i> Provides 'hand-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. <i>Three hours lecture, one hour lab weekly by arrangement (8 week course).</i>	1.5 Units
CIS 087 Adobe Illustrator for the Web <i>Course Advisories: SCC minimum English and math standards CIS 001 or CIS 050 with a grade of Pass or No Pass or better or equivalent.</i> 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. Repeatability: None. The course may be taken up to three times for credit if the software version has changed. <i>Three hours lecture, one hour lab.</i>	3.0 Units	CIS 100 Fast Track Introduction To Computers <i>Course Advisories: SCC minimum English and math standards.</i> A brief introduction to the microcomputer for novices. Includes an overview of computer components and functions, as well as its uses. This is a credit/no credit only course. <i>Eight hours lecture (1 week course).</i>	.5 Unit
CIS 089 Essential Networking Technologies <i>Course Advisories: CIS 001 with a grade of 'C' or 'CR' or better; SCC minimum English and math standards.</i> 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. <i>Three hours lecture, one hour lab weekly by arrangement.</i>	3.0 Units	CIS 101 Fast Track Windows <i>Course Advisories: SCC minimum English and math standards; previous computer experience; keyboarding at 30wpm.</i> Designed to introduce the student to the most elementary functions of Windows. This is a credit/no credit only course. <i>Eight hours lecture. (1 week course).</i>	.5 Unit
CIS 090 Introduction To Powerpoint <i>Course Advisories: CIS 001 or CIS 050 with a grade of 'C' or 'CR' or better; ability to keyboard.</i> This course introduces features and design concepts utilized in developing powerful presentations using a package software such as Microsoft PowerPoint. <i>Three hours lecture, one hour lab weekly by arrangement (8 week course).</i>	1.5 Units	CIS 102 Fast Track Microsoft Word <i>Course Advisories: SCC minimum English and math standards; previous computer experience; keyboarding at 30wpm.</i> Designed to introduce to students the most elementary functions of Microsoft Word. This is a credit/no credit only course. <i>Eight hours lecture (1 week course).</i>	.5 Unit
CIS 091 Microsoft Outlook <i>Course Advisories: SCC minimum English standard, CIS 001 or CIS 050 with a grade of 'C' or better; basic keyboarding skills.</i> 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. <i>Three hours lecture, one hour lab weekly (8 week course).</i>	1.5 Units	CIS 103 Fast Track Internet <i>Course Advisories: SCC minimum English and math standards; previous computer experience; keyboarding at 30wpm.</i> Designed to introduce the student to the most elementary features of working on the Internet. This is a credit/no credit only course. <i>Eight hours lecture. (1 week course).</i>	.5 Unit
		CIS 104 Fast Track Powerpoint <i>Course Advisories: SCC minimum English and math standards; previous computer experience; keyboarding at 30wpm.</i> Designed to introduce the student to the most elementary functions of Microsoft PowerPoint. This is a credit/no credit only course. <i>Eight hours lecture. (1 week course).</i>	.5 Unit

Computer and Information Science

CIS 105 Fast Track Excel <i>Course Advisories: SCC minimum English and math standards; previous computer experience; keyboarding at 30wpm.</i> Designed to introduce the student to the most elementary functions of Excel. This is a credit/no credit only course. <i>Eight hours lecture.</i> (1 week course).	.5 Unit	CIS 111 Web Design with Cascading Style Sheets <i>Course Advisories: CIS 061 with a grade of 'C' or 'CR' or better; SCC minimum English and math standards.</i> 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. <i>Three hours lecture, one hour lab weekly by arrangement.</i> (8 week course).	1.5 Units
CIS 106 Fast Track Computer Literacy <i>Course Advisories: SCC minimum English and math standards.</i> Designed to provide a brief introduction to microcomputers for novices. It includes an introduction to computer components, and also includes hands-on activities utilizing the Windows operating system, word processing and spreadsheet software and the internet. This is a credit/no credit only course. <i>Two hour lecture, one hour weekly by arrangement.</i> (8 week course).	1.0 Unit	CIS 112 Introduction to Robotics Programming <i>Prerequisite: CIS 1. Course Advisories: SCC minimum English and math standards.</i> 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 manipulate 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. <i>Three hours lecture, one hour lab weekly by arrangement.</i>	3.0 Units
CIS 107 Fast Track Outlook <i>Course Advisories: SCC minimum English and math standards.</i> Designed to introduce to students to a desktop information management program using Microsoft Outlook for email, calendaring, contacts, tasks, files, and to track activities. This is a credit/no credit only course. Eight hours lecture. (1 week course).	.5 Unit	CIS 113 Introduction to Programmable Logic Controllers <i>Prerequisite(s): CIS 001. Course Advisory: SCC minimum English and Math Standards.</i> 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. <i>Three lecture hours.</i>	3.0 Units
CIS 108 Fast Track WordPerfect <i>Course Advisories: SCC minimum English and math standards; previous computer experience; keyboarding at 30wpm.</i> Designed to introduce to students the most elementary functions of WordPerfect. This is a credit/no credit only course. <i>Eight hours lecture.</i> (1 week course).	.5 Unit	CIS 115 COBOL Programming <i>Prerequisites: CIS 022 with a grade of 'C' or 'CR' or better or CIS 015 with a grade of 'C' or 'CR' or better. Course Advisories: SCC minimum English and math standards.</i> Covers elements of the COBOL programming language including data description; arithmetic operations; sequential, random, and indexed file manipulation; tables; sorting; data validation; and control break summary reports. Emphasis will be on top-down, structured design techniques. <i>Three hours lecture, one hour lab weekly by arrangement.</i>	3.0 Units
CIS 109 Fast Track Quicken For Windows <i>Course Advisories: SCC minimum English and math standards; previous computer experience; keyboarding at 30wpm.</i> Designed to introduce the student to the most elementary functions of Quicken for Windows 2005. This is a credit/no credit only course. <i>Eight hours lecture.</i> (1 week course).	.5 Unit		
CIS 110 Wireless Lans <i>Course Advisories: CIS 001 with a grade of 'C' or 'CR' or better; SCC minimum English and math standards.</i> 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. <i>Three hours lecture, one hour lab weekly.</i> (8 week course).	1.5 Units		

Computer and Information Science

CIS 119

3.0 Units

Project Management

Prerequisites: CIS 001 or CIS 050 and BUS 005. *Course Advisories:* ECON 002, ACCT 002, CIS 091, BUS 092; SCC minimum English and math standards. This course integrates business concepts used in managing a development or business project such as the project's scope and goals, management of communication, cost and time management, and human resources together with using project management computer software designed for these tasks. Students will manage case studies using their understanding of business and using the software. (Same as BUS 119) *Three hours lecture, one hour lab weekly by arrangement.*

CIS 120

1.5 Units

Developing XML Web Services

Prerequisite(s): CIS 072. *Course Advisory:* SCC minimum English and Math Standards and CIS 001. 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 weekly 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 weekly by arrangement.*

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. (Same as ECTN 172). *1 hour lecture, 1.5 hours lab weekly.*

CIS 173

3.0 Units

Computer Forensics Investigations

Prerequisite(s): CIS 001. *Course Advisory:* SCC minimum Math standard and Eligibility for ENGL 001. 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. (Same as ECTRN 173).

CIS 174

3.0 Units

Computer Forensics: Operating Systems Internals

Prerequisite(s): CIS 173 with a Grade of C or better or ECTRN 173 with a Grade of C or better. *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. (Same as ECTRN 174). *Two lecture hours, and 3 hours lab weekly.*

CIS 178

.5 Unit

Fast Track Access

Advisories: Minimum Standards: SCC minimum English and MATH standards; Previous computer experience, keyboarding at 30wpm. Designed to introduce to students the most elementary functions of database management using Access. *Eight hours lecture.* (1 week course).

CIS Special Topics

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.

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 37.5 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 37.5 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 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
<i>or</i>	
COSM 175 Cosmetology Education Practicum	6
Total Units	37.5

Recommended Electives:

COSM 103a Cosmetology IV
COSM 103b Cosmetology V
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 118A Imaging Systems I
COSM 118B Imaging Systems II
COSM 171 Manicure Practices
COSM 172 Pedicure Practices
COSM 173 Artificial Nails
COSM 174 Nail Systems
COSM 175 Cosmetology Education Practicum
OCED 090 Occupational Work Experience
OCED 091 General Work Experience
COSM 104A Esthetics of Skin Care I

Nail Technician Job-Direct Certificate

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

Required Courses Units

COSM 171 Manicure Practices	3
COSM 172 Pedicure Practices	3
COSM 173 Artificial Nails	3
COSM 174 Nail Systems	3
Total Units	12

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

Cosmetology

COSM 100

12.5 Units

Cosmetology I

Course Advisory: SCC minimum English standard. The first course in a three semester series to provide the training towards the state mandated 1600 hours of intensive training and study designed to prepare the student for the California State Board of Cosmetology examination for licensure. Introduces theories, concepts, principles and practice in the beauty culture. The student will focus on the fundamental techniques and application skills for cosmetology processes. Critical thinking skills are developed in the application of the concepts of client consultation, communication, hair care, nail care, skin care and cosmetology processes. NOTE: Students are required to attend the cosmetology orientation meeting and purchase a materials card at registration in addition to the registrations fees. Students are required to purchase an equipment kit and materials card from the SCC College Bookstore. The cost of the materials card and start-up materials varies. To qualify for the State examination for license, students must have completed the following: designated license hours and requirements; 10th grade or equivalent; be at least 18 years of age. Not open to students who have received credit for COSME 150 or 151. *Five hours lecture, twenty-two and one-half hours lab.*

COSM 101

12.5 Units

Cosmetology II

Prerequisites: COSM 100 or COSM 150 and 151. The second of a three semester course series in Cosmetology to provide the training towards the state mandated 1600 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 culture. This course provides the students with the opportunity to synthesize and utilize cosmetology knowledge and skills in providing multiple clients with hair care, nail care and skin care service in the Patron Laboratory. 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-two and one-half hours lab.*

COSM 102

12.5 Units

Cosmetology III

Prerequisite: COSM 101. The third in a series of a three semester course series in Cosmetology to provide the training towards the state mandated 1600 hours of intensive training and study designed to prepare the student for the California State Board of Cosmetology examination for licensure. Includes 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 lab. 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, 22.5 hours lab.*

COSM 103A

6.0 Units

Cosmetology IV

Prerequisite(s): COSM 100,101,102. Course Advisory: SCC minimum English and math standards. 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. 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 and twenty two and one-half hours lab* (8 weeks course).(Formerly COSM 103)

COSM 103B

6.0 Units

Cosmetology V

Prerequisite(s): 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

Prerequisites: 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 faciating 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 Cosmetology orientation (see Schedule of Classes for the date and time). *Five hours lecture, thirty hours lab.*

Cosmetology

COSM 104B **1.0 to 4.0 Units** **Esthetic Skin Care II**

Prerequisites: COSME 104A. A continuation of Cosmetology 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. 1 unit requires 50 hours total; 2 units require 100 hours total; 3 units require 150 hours total; 4 units require 200 hours. A total of fifty lab hours per semester per unit. *Five hours lecture, thirty hours lab.*

COSM 105A **10.0 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. Repeatability: Not Repeatable. 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: Students are required to purchase a mandatory equipment kit and materials card at the college bookstore. Additionally, students are required to attend the Cosmetology Orientation (see schedule of Classes for the Orientation date and time). This class is not open to students enrolled in 104A.

COSM 105B **10.0 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. Repeatability: Not Repeatable. This course continues the basic skills practice and technical training from COSME 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 COSME 104A or students enrolled in COSME 104B.

COSM 110 **1.0 to 3.0 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: 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 hours activities.* (6 week course).

COSM 111 **2.0 Units** **Special Hair Processing**

Prerequisite: Current California State Cosmetology License or COSM 100 (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.*

Cosmetology

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.*

COSM 115 **13.0 Units** **Cosmetology Instructor Training I**

Prerequisites: 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**

Prerequisite: None. NOTE: Not open to students who have completed COSM 171, 172, 173, or 174. 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 cosmetology orientation (see orientation 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. *Five hours lecture, thirty hours lab.*

COSM 118A **2.0 Units** **Imaging Systems I**

Prerequisite: Successful completion of COSM 100 or currently licensed with the California Board of Barbering and Cosmetology. Presents the basic concepts and uses of computerized imaging systems, including the study of theoretical principles of computerized hair styling and hair cutting for creating graphic images. 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 118B **2.0 Units** **Imaging Systems II**

Prerequisite: COSM 118A. Presents the theory and use of computer imaging systems. An in-depth study of client consultation principles, color analysis, make-up application, and hair styling options as applied to creating graphic computer images. The students use the New Image System's Computer for creating total makeovers. NOTE: Students are required to purchase a materials card from the SCC bookstore. *One hour lecture, three hours lab.*

Cosmetology

COSM 150

7.5 Units

Basic Concepts

Prerequisite: Completion of the tenth grade or equivalent required by state law. Course Advisory: SCC minimum English standard. Provides a format for students to study basic cosmetology issues of the industry and basic style trend changes. The first course in a two-course sequence which is equivalent to COSM 100. NOTE: First-time students will be required to attend the cosmetology orientation meeting and purchase a materials card from the SCC bookstore at registration, in addition to the registration fees. The cost of the materials card and start-up material is in addition to the registration fees and varies. For current costs, please refer to the Schedule of Classes for each semester. To qualify for the cosmetology licensure examination as required by California State Board of Barbering and Cosmetology, students must have completed the designated license hours and requirements, completed the designated license hours and requirements, completed the tenth grade or equivalent and be at least 18 years of age. Not open to students who have received credit for COSM 100. *Five hours lecture, thirty hours lab* (9 week course).

COSM 151

7.5 Units

Basic Concepts in Cosmetology

Prerequisite: COSM 150. Course Advisory: SCC minimum English standard. Provides a format for student to study more in depth issues of the industry and to examine theoretical and practical trend changes. The second course in a two-course sequence which is equivalent to COSM 100. Completion of the tenth grade or equivalent and 18 years of age to be eligible for cosmetology licensure examination as required by California State Board of Barbering and Cosmetology. 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. Not open to students who have received credit for COSM 100. *Five hours lecture, thirty hours lab* (9 week course).

COSM 171

3.0 Units

Manicure Practices

Prerequisite: None. NOTE: Not open to students who have completed COSM 117. Course Advisory: SCC minimum English standard. Provides one hundred (100) hours of training and intensive study in various methodologies of nail care including water and European manicures, spa therapy massage and reflexology techniques, with emphasis on practical skills including client consultation, safety, and analysis of manicure cosmetics. First-time students enrolling in the Cosmetology-Manicuring class series 171, 172, 173, 174, 175 will be required to attend the cosmetology orientation meeting and purchase a materials card at registration in addition to the registrations fees (refer to the schedule of classes). 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. Not open to students who have received credit for Cosmetology 117. *Five hours lecture, fifteen hours lab* (5 week course).

COSM 172

3.0 Units

Pedicure Practices

Prerequisite: None. NOTE: Not open to students who have received credit for COSM 117. Course Advisory: SCC minimum English standard. Provides one hundred (100) hours of training and intensive study in various techniques of pedicuring with emphasis on practical skills including foot care, sanitation and patron safety. First-time students enrolling in the Cosmetology-Manicuring class series 171, 172, 173, 174, 175 will be required to attend the cosmetology orientation meeting and purchase a materials card at registration in addition to the registrations fees (refer to the schedule of classes). 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. Not open to students who have received credit for Cosmetology 117. *Five hours lecture, fifteen hours lab* (5 week course).

COSM 173

3.0 Units

Artificial Nails

Prerequisite: None. Course Advisory: SCC minimum English standard. Provides one hundred (100) hours of training and intensive study in artificial nail services including acrylic, tips, and nail wrap methodologies with emphasis on techniques and application skills, identification of artificial nail preparations as related to chemical and non-chemical changes. First-time students enrolling in the Cosmetology-Manicuring class series 171, 172, 173, 174, 175 will be required to attend the cosmetology orientation meeting and purchase a materials card at registration in addition to the registrations fees (refer to the schedule of classes). 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. Not open to students who have received credit for Cosmetology 117. *Five hours lecture and fifteen hours lab* (5 week course).

COSM 174

3.0 Units

Nail Systems

Prerequisite: None. Course Advisory: SCC minimum English standard. Provides one hundred (100) hours of training in nail system concepts, practices, and principles, including nail strengthening and artificial extension, adhesive, non-adhesive, acrylic, and non-acrylic nails and practical applications of ergonomic techniques. First-time students enrolling in the Cosmetology-Manicuring class series 171, 172, 173, 174, 175 will be required to attend the cosmetology orientation meeting and purchase a materials card at registration in addition to the registrations fees (refer to the schedule of classes). 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. Not open to students who have received credit for Cosmetology 117. *Five hours lecture and fifteen hours lab* (5 week course).

Cosmetology

COSM 175

Cosmetology Education Practicum

Prerequisites: COSM 100, or 101, or 102, or 104A, or 104B, or 117, or 171, or 172, or 173, or 174. 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. 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 purchase a materials fee at the time of registration. Not open to students who have completed Cosmetology 103B. *Four hours lecture, twenty four hours lab* (8 week course)

6.0 Units

COSM Special Topics

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.

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 Advisories: Eligibility for ENGL 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 Advisories: Eligibility for ENGL 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 Advisories: Eligibility for ENGL 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 060

2.0 Units

Strategies For Re-Entry Success

Course Advisory: SCC minimum English standard. Designed to give students who are returning to school after an absence an introduction to and practice in skills to successfully complete college level studies. This course is intended to facilitate students' confidence in their abilities to succeed through: an introduction to academic skills and effective communication; and exploration of college goal choices. Also included are techniques to help students discover and overcome common barriers such as: fears, time constraints, family resistance and personal stressors. *Two hours lecture.*

COUN 061

2.0 Units

Math Without Fear

Course Advisory: SCC minimum English standard. A counseling course to help math-anxious students evaluate the causes of math anxiety, to develop interventions to reduce math fear, to review math skills and to explore a variety of mathematical concepts. *Two hours lecture.*

COUN 062

3.0 Units

Helping Skills: Creating Alliances & Facilitating Change

Course Advisories: COUN 083, Eligibility for ENGL 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 063

3.0 to 6.0 Units

Field Work

Prerequisite: COUN 062. Course Advisories: Eligibility for ENGL 001 and SCC minimum math standard; HS 055 (or concurrent enrollment)(for Human Services Majors only). A field work experience course designed to provide students with supervised experiential learning opportunities in a variety of community settings related directly to working in Human Services or other humanistic fields of study. This experience can be for pay or volunteer and students are expected to have established an approved placement by the end of the second week of class. The field experience will be combined with classroom lecture and discussion to promote continued career and helping skills development in order to become effective culturally sensitive professionals. May be repeated to a maximum of 12 units, including initial enrollment. *Two hours lecture and four to twelve hours weekly by arrangement.*

COUN 064A

4.0 Units

Practicum I

Prerequisites: COUN 062, HS 051, HS 053. Course Advisories: Eligibility for ENGL 1 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 Advisories: Eligibility for ENGL 001, SCC minimum Math standard and HS 055. 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 Associates degree requirement and will help students further clarify their potential for a longer range educational and career path in Human Services, Social Work or Counseling. Practicum Sites often require students to pass a criminal background check. Repeatable 2 times. *Two hours lecture, six hours by arrangement.*

COUN 068

1.0 Unit

University Transfer Success

Course Advisories: 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 Advisories: Eligibility for ENGL 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 Advisories: 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 Lecture Hours Weekly.*

Counseling

- COUN 101** .5 Unit
Orientation For College Success
Course Advisories: SCC minimum English and Math standards. This short-term course provides an in-depth orientation to college by introducing students to Solano Community College's student support services, describing certificate, associate degree and transfer preparation and requirements, and by reviewing the college's academic expectations. Educational goal setting will also be introduced. Students will be required to purchase a current Solano College catalog. *Two hours lecture.*
- COUN 102A** .5 Unit
Time Management & Goal Setting
Course Advisories: 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 7 with a grade of "C" or better. *Four hours lecture* (2 week course).
- COUN 102B** .5 Unit
Test Taking, Test Anxiety & Memory
Course Advisories: 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 7 with a grade of "C" or better. *Four hours lecture.* (2 week course)
- COUN 102C** .5 Unit
Study Systems
Course Advisories: 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 7 with a grade of "C" or better. *Four hours lecture.* (2 week course)
- COUN 103** 3.0 Units
Disability And Success
Course Advisory: SCC minimum English and Math Standards; Primarily for students with disabilities. This is an orientation course to assist students with disabilities in accessing services and completing their community college goals. It includes the SCC Disability Service Program, the College community, community agencies serving people with disabilities, laws and disabilities, coping with a disability, self advocacy, success in the classroom, and a final "Plan for Personal Disability Management." Student will receive a letter grade. *Three lecture hours.*
- COUN 104** 3.0 Units
Wellness and Maintaining Good Health
This course provides the tools, goals, and objectives, toward creating and maintaining good mental health. The course also addresses strategies for creating and maintaining health in the face of living with a chronic illness. Students will create their personal Wellness and Recovery Action Plan (WRAP) based on the concepts presented. This is a Pass/no-pass only course. *Three lecture hours.*
- COUN 148B** 1.0 Unit
Math, Engineering And Science Achievement (MESA) Enrichment
This course is designed to assist Math, Engineering and Science Achievement (MESA) students to obtain the knowledge and skills necessary to reach their educational objectives in engineering, mathematics and science related fields. However, the course is open to all students. Topics to be covered include: decision making on careers; educational and personal enrichment; math and science study skills and habits including time management, academic preparation, building of self-confidence; and transfer and career strategies in math, engineering and science. *One hour lecture.*
- COUN 148D** 3.0 Units
Wellness and Maintaining Good Health
This course provides the tools, goals, and objectives, toward creating and maintaining good mental health. The course also addresses strategies for creating and maintaining health in the face of living with a chronic illness. Students will create their personal Wellness and Recovery Action Plan (WRAP) based on the concepts presented. This is a Pass/No Pass only. *Three hours lecture.*
- COUN 148E** 1.0 Unit
Transition To College for Students with Disabilities
This is a transition course for high school seniors who are planning on entering the Community College system and receiving Disability Services. It includes the matriculation process of entering into college, the difference between college and high school for students with disabilities. Students will obtain a beginning understanding of how to navigate successfully through the Community College system and Disability Services. This is a pass/no pass only course. *Two hours lecture.*

Counseling

COUN 301

3.0 Units

Career Awareness and Disability Success

Prerequisite: Permission of Disability Services Counselor to help the student make a match between this specialized disability course content and methodology and the individual's needs and expected learning outcomes. Course Advisory: Primarily for Students with Disabilities. This course introduces career and job awareness and readiness for students with a disability. It will cover career and job related, interests, aptitudes, and personality characteristics. Students will also develop an awareness of the strengths and difficulties with their disability in particular job related task analyses. Disability related community agencies, as well as disability benefits versus employment salaries will be covered. This is a pass / no-pass only course. Repeatable 1 time. *Three lecture hours.*

COUN 302

3.0 Units

Adaptive Personal Development Life Skills

Prerequisite: Permission of Disability Services Counselor to help the student make a match between this specialized disability course content and methodology and the individual's needs and expected learning outcomes. Course Advisory: Primarily for students with disabilities. This Adaptive Personal Development course will teach students methods to enhance their self esteem and self determination. Students will also learn disability awareness, a healthy life style, interpersonal relations, and independent living skills. This is a pass / no-pass only course. Repeatable 1 time. *Three lecture hours.*

COUN 303

3.0 Units

Life Skills for Health

Prerequisite: Permission of Disability Services Counselor to help the student make a match between this specialized disability course content and methodology and the individual's needs and expected learning outcomes. This is a health course primarily for students with disabilities who are transitioning into the community for the purpose of having a healthy approach to life for personal, family and career life skills. This is a pass / no-pass only course. Repeatable 1 time. *Three lecture hours.*

COUN Special Topics

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.

Learning Skills

LS 102

3.0 Units

Learning Skills Strategies

Course Advisories: SCC minimum English and math standards. Enrollment in other college courses recommended as strategies are applied to curricular materials. Helps the student with cognitive learning and processing disabilities that is planning to transfer to a 4-year school. The student will learn to analyze, compare, think critically and select effective learning strategies to help them access college curricular materials. Throughout the semester, students will learn to develop their self-understanding and ability to advocate for effective accommodations in academic, work, and social settings. *Two hours lecture, two hours activity.*

LS 301B

1.0 Unit

Reading Strategies

Course Advisories: SCC minimum English and math standards. Enrollment in other classes is strongly recommended as strategies are applied to curricular materials. This course is one in a series of four that helps students with cognitive processing disabilities. This course focuses on strategies specific to reading needs. Students will learn to apply paraphrasing, questioning, pre-reading, vocabulary, and other strategies to help with their processing deficits. This is a Pass/No pass only course. *Two hours lecture, one hour activity* (8 week course).

LS 301C

1.0 Unit

Writing Strategies

Course advisory: SCC minimum English and math standards; student advised to meet with DSP counselor and instructor prior to enrollment. Student advised to take other non-Learning Skills courses. This course is one in a series of four that helps students with cognitive processing disabilities. This course focuses on alternative strategies to become skillful in sentence writing, paragraph writing, error monitoring and theme writing to access their college classes. This is a Pass/No pass only course. *Two hours lecture, one hour activity* (8 week course).

LS 306A

3.0 Units

Spelling Strategies

Emphasizes special spelling techniques, computer-assisted instruction, and assistive-device instruction to help the student compensate for a specific spelling disabilities impacting his/her college courses. Covers phoneme awareness, morphograph analysis, and beginning rule applications to affixes and base words. The students also begin to learn compensatory strategies. This is a Pass/No pass only course. Repeatable 1 time NOTE: Combined enrollments in LS 306A and LS 306B may not exceed 3. *Three hours lecture.*

Counseling

LS 306B

3.0 Units

Spelling Strategies

Prerequisite: LS 306A. Spelling strategies for students with learning disabilities emphasizes special spelling techniques, computer-assisted instruction, and assistive-device instruction to help the student compensate for specific spelling disabilities impacting his/her college courses. 306B will continue with additional morphograph analysis, new rule applications, and concentration on compensatory strategies, greater emphasis on written application. This is a Pass/No pass only course. Repeatable 1 time NOTE: Combined enrollments in LS 306A and LS 306B may not exceed 3. *Three hours lecture.*

LS 307

3.0 Units

Reading for Life Skills

Prerequisite: Permission of Disability Services Counselor to help the student make a match between this specialized disability course content and methodology and the individual's needs and expected. *Course Advisory: Primarily for Students with Disabilities.* This reading course is written specifically for basic level readers to address their need to understand the printed material they encounter in everyday situations. The reading involves practical life skills materials such as the newspaper, job applications, work place, supermarket, restaurant, department store, directories and guides, personal health, nutrition, and grooming, bills, and much more. This is a pass / no-pass only course. Repeatable 1 time. *Three hours lecture.*

LS 308

3.0 Units

Math for Life Skills

Prerequisite: Permission of Disability Services Counselor to help the student make a match between this specialized disability course content and methodology and the individual's needs and expected learning outcomes. *Course Advisory: Primarily for Students with Disabilities.* This course will teach students the ability to solve math problems from everyday life situations. Students will decide to apply either addition, subtraction, multiplication, or division to everyday life situations. They will also learn the use of decimals, percents, and fractions in practical applications. The use of the calculator will be taught as an additional tool for life skills math. This course is not meant to prepare students for advancement to higher level math courses at the college. This is a pass / no pass only course. Repeatable 1 time. *Three hours lecture.*

LS 312

1.0 Unit

Computer Tools For Accessibility

Course Advisories: SCC minimum English and math standards and concurrent enrollment in a non-Learning Skills course. Designed especially for the student with cognitive disabilities offering a variety of problem-solving solutions that include fundamental processing routines, academic skills solutions and productivity solutions. Students learn to be more successful in other college courses by integrating computers, software, and assignment requirements. This is a Pass/No pass only course. May be repeated to a maximum of 3 units, including initial enrollment. *One hour lecture, one hour activity, and one hour lab.*

LS 313

1.0 Unit

Assistive Computer Technology I

Course Advisories: SCC minimum English and math standards. A course for disabled students wishing to learn how to use assistive computer programs and hardware in academic and employment environments. Students will master the procedures for a configuration of assistive devices designed to overcome the limitations of their particular disabilities. May be repeated to a maximum of 6 units, including initial enrollment. *Two hours lecture, two hours activity* (8 week course).

LS 315

1.0 Unit

Assistive Computer Technology II

Prerequisite: LS 313. *Course Advisories: SCC minimum English and math standards.* The second of a two course sequence for disabled students wishing to learn how to use assistive computer programs and hardware in academic and employment environments. Students will master the procedures for a configuration of assistive devices designed to overcome the limitations of their particular disabilities. May be repeated to a maximum of 6 units, including initial enrollment. *Two hours lecture, two hours activity* (8 week course).

LS 348B

3.0 Units

Reading for Life Skills

Prerequisite: Permission of Disability Services Counselor to help the student make a match between this specialized disability course content and methodology and the individual's needs and expected. *Course Advisory: Primarily for Students with Disabilities.* This reading course is written specifically for basic level readers to address their need to understand the printed material they encounter in everyday situations. The reading involves practical life skills materials such as the newspaper, job applications, work place, supermarket, restaurant, department store, directories and guides, personal health, nutrition, and grooming, bills, and much more. This is a pass / no pass only course. *Three hours lecture.*

Counseling

LS 348D

1.0 Unit

Tutoring

Adaptive Basic Computer Skills

Course Advisory: Primarily for Students with Disabilities.

A basic skills computer course primarily for students with disabilities. Students will learn disability-specific assistive computer technology and learn basic computer operations for everyday life. This is a Pass/No Pass course. *One lecture hour and two lab hours.*

LS 350

3.5 Units

Learning Skills Assessment

Course Advisory: Eligible for ENGL 305. This course is designed to help students know their academic strengths and weaknesses, help students discover their study and learning strategy style, and if necessary individually assess for a Learning Disability. Through reading, class activities, surveys, questionnaires, and assessment measures the student develops strategies that lead to proactive skills that help them become a more successful college student. *Three hours lecture; two hours by arrangement.*

LS Special Topics

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.

TUTR 050

.5 Unit

Tutoring Practicum

Prerequisites: Completion with a grade of 'B' or better 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

Supervised Tutoring

Prerequisites: 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. Repeatable 6 times. This is an open entry/open exit course. *One-half to three hours weekly by arrangement.*

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 34 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 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
ECTN 122 Computer Network+ Technology	4
ECTN 124 Computer Security+ Technology	4
ECTN 126 A+ Computer Hardware Technology	4
ECTN 128 A+ Computer Operating Systems Technology	4
CIS 172 Computer Forensics: Evidence Recovery	1.5
<i>or</i>	
ECTN 172 Computer Forensics: Evidence Recovery	1.5
CIS 173 Computer Forensics Investigations	3
<i>or</i>	
ECTN 173 Computer Forensics Investigations	3
CIS 174 Computer Forensics: Operating Systems Internals	3
<i>or</i>	
ECTN 174 Computer Forensics: Operating Systems Internals	3
LR 011 Internet Explored! Advanced Information Competency	1.5
Total Units	34

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 090 Occupational Work Experience
OCED 091 General Work Experience
OT 054 Beginning Keyboarding
OT 055 Intermediate Keyboarding/Word Processing
SOCS 022 Ethnic, Racial and Minority Group Relations in Harmony and Conflict
SPAN 001 First Semester Spanish
SPAN 002 Second Semester Spanish

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 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 continuation 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

Electives selected from the following list. Units

Select six (6) units from the following:

CJ 057 Criminal Justice Career Development.	3
CJ 060 Probation and Parole	3
CJ 061 State and Local Correctional Institutions	3
CJ 062 Legal Aspects of Correction	3
CJ 091 Vocational Work Experience – Corrections	1-3

Recommended Electives

CIS 002
<i>and</i>
CIS 050 Microcomputer Applications
COUN 062 Helping Skills: Creating Alliances & Facilitating Change
COUN 063 Field Work
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 090 Occupational Work Experience
OCED 091 General Work Experience
OT 054 Beginning Keyboarding
OT 055 Intermediate Keyboarding/Word Processing
SOCS 022 Ethnic, Racial and Minority Group Relations in Harmony and Conflict
SOCS 030 Peace, Non Violence and Conflict Resolution
SPCH 010 Interpersonal Communication
SPAN 001 First Semester Spanish
SPAN 002 Second Semester Spanish

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 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 continuation 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

Electives selected from the following list	Units
Select six (6) units from the following:	
CJ 050 Substantive Law	3
CJ 054 Patrol Procedures	3
CJ 055 Traffic Control	3
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 002
and
CIS 050 Microcomputer Applications
ENGL 004 Critical Thinking and Composition: Language in Context
ENGL 051 Technical Writing
OCED 090 Occupational Work Experience
OCED 091 General Work Experience
OT 054 Beginning Keyboarding
OT 055 Intermediate Keyboarding/Word Processing
SOCS 022 Ethnic, Racial and Minority Group Relations in Harmony and Conflict
SPAN 001 First Semester Spanish
SPAN 002 Second Semester Spanish

Criminal Justice

CJ 001 Introduction to Criminal Justice <i>Course Advisories: SCC minimum English and math standards.</i> Introduction to Criminal Justice presents an overview of informal and formal means of social control. It is a study of the history, evolution, philosophy, structure, operation and role of the criminal justice system and its component sub-systems (law enforcement, courts, corrections). It also explores the history of the U.S. Constitution and application of constitutional principles; theories of crime causation and criminal behavior. Another component of this course is the study of professional ethics, education and training for professionals in the criminal justice system. Required for all Criminal Justice majors. <i>Three hours lecture.</i>	3.0 Units	CJ 052 Investigative Report Writing <i>Course Advisory: Eligibility for ENGL 001; CJ 001; CJ 002; CJ 051.</i> 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. <i>Three hours lecture.</i>	3.0 Units
CJ 002 Concepts of Criminal Law <i>Course Advisories: SCC minimum English and math standards; CJ 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units	CJ 053 Legal Aspects of Evidence <i>Course Advisories: SCC minimum English and math standards; CJ 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units
CJ 011 Community Relations <i>Course Advisories: SCC minimum English and math standards.</i> An exploration of actual and perceived special roles of criminal justice agencies and individual practitioners; interrelationships and role expectations of criminal justice practitioners and various individuals and groups; propaganda and pressure groups. Principal emphasis will be placed upon the development of the professional image of the criminal justice system and upon development of positive relationships between members of the criminal justice system and the public. <i>Three hours lecture.</i>	3.0 Units	CJ 054 Patrol Procedures <i>Course Advisories: SCC minimum English and math standards; CJ 001.</i> Presents the responsibilities, techniques and methods of modern police patrol. <i>Three hours lecture.</i>	3.0 Units
CJ 050 Substantive Law <i>Course Advisories: CJ 002; SCC minimum English and math standards.</i> A detailed study of statutory law and corollary case law commonly used by criminal justice practitioners, with emphasis on California Penal, Welfare and Institutions, Vehicle, and Business and Professions Codes. <i>Three hours lecture.</i>	3.0 Units	CJ 055 Traffic Control <i>Course Advisories: SCC minimum English and math standards; CJ 001.</i> A study of traffic law enforcement, regulations and control; fundamentals of traffic accident investigation, and an overview of the California Vehicle Code. <i>Three hours lecture.</i>	3.0 Units
CJ 051 Criminal Investigations <i>Course Advisories: SCC minimum English and math standards; CJ 001.</i> Fundamentals of investigation, crime scene search and recording, collection and preservation of evidence, scientific aid; interviews and interrogation, follow-up and case preparation. <i>Three hours lecture.</i>	3.0 Units	CJ 056 Juvenile Procedures <i>Course Advisories: SCC minimum English and math standards; CRIMJ 1.</i> Presents the organization, function, and jurisdiction of juvenile agencies; the processing and detention of juveniles; juvenile case disposition; juvenile statutes and court procedures. <i>Three hours lecture.</i>	3.0 Units
		CJ 057 Criminal Justice Career Development <i>Course Advisories: SCC minimum English and math standards; CJ 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units

Criminal Justice

CJ 058 3.0 Units

Fundamentals of Crime and Delinquency

Course Advisories: SCC minimum English and math standards; CJ 001. 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 Advisories: SCC minimum English and math standards; CJ 001. 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 Advisories: SCC minimum English and math standards; CJ 001; CJ 058. 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 061 3.0 Units

State and Local Correctional Institutions

Course Advisories: SCC minimum English standards; CJ 058. Provides theoretical and practical methods and solutions for achieving effectiveness in the various leadership correctional institutional programs. *Three hours lecture.*

CJ 062 3.0 Units

Legal Aspects of Correction

Course Advisories: SCC minimum English and math standards; CJ 058. 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 Advisories: SCC minimum English and math standards; CJ 001. 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 Advisories: 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. This is a credit/no credit only course. May be repeated to a maximum of 12 units, including initial enrollment. NOTE: Combined units for all work experience courses shall not exceed 12. *One hour lecture and five to twenty hours weekly 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.

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. This is a credit/no credit only course. May be repeated to a maximum of 12 units, including initial enrollment. NOTE: Combined units for all work experience courses shall not exceed 12. *One hour lecture and five to twenty hours weekly 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.

CJ Special Topics

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.

Drafting Technician

Program Description

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

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 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 CAD software programs.

Required Courses Units

DRFT 045 Introduction to Computer-Aided Drafting (CAD)	3
DRFT 046 Advanced CAD	3
DRFT 050 Basic Drafting	3
DRFT 055 Mechanical Drafting - Level I	3
DRFT 060 Architectural Drafting I	3
DRFT 075 Electronic Drafting	3
DRFT 080 Civil Drafting I	3
IT 140 Industrial Materials	3
IT 151 Vocational Mathematics	3
DRFT 125 Solid Modeling with Solidworks	3
Total Units	30

Recommended Electives

DRFT 056 Descriptive Geometry
DRFT 057 Mechanical Drafting - Level II
DRFT 065 Architectural Drafting II
DRFT 070 Technical Illustration and Design
DRFT 079 Blueprint Reading
DRFT 085 Civil Drafting II
DRFT 092 Special Problems
DRFT 130 Advanced Printed Circuit Board Design
DRFT 135 Structural & Detail Drafting
DRFT 140 Surveying
INTD 052 Drafting and Perspective Drawing for Interiors
IT 150 Industrial Processes
OCED 090 Occupational Work Experience
OCED 091 General Work Experience
HORT 030 Landscape Design I

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.

Drafting Technician

Survey Technician/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 in Science Degree

A Certificate of Achievement can be obtained upon completion of 27 core requirement units. An Associate of Science degree may be obtained by completing 27 core units in addition to 15 units of restricted elective courses and 21 units of General Education.

Program Outcomes

Students who complete the 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 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 050 Basic Drafting	3
DRFT 060 Architectural Drafting I	3
GEOL 010 Introduction to Geographic Information Systems	3
<i>or</i>	
GEOG 010 Introduction to Geographic Information Systems	3
DRFT 080 Civil Drafting I	3
DRFT 085 Civil Drafting II	3
DRFT 140 Surveying	3
IT 151 Vocational Mathematics	3
Total Units	27

Electives for Associate of Science degree

DRFT 056 Descriptive Geometry
DRFT 065 Architectural Drafting II
DRFT 070 Technical Illustration and Design
DRFT 079 Blueprint Reading
DRFT 092 Special Problems
IT 150 Industrial Processes
GEOL 001 Physical Geology
GEOL 002 Geology Laboratory
GEOL 005 Geology of California
GEOG 060 Advanced Geographic Information Systems
GEOG 061 Introduction to Global Positioning Systems
GEOG 062 Advanced Global Positioning Systems

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

*Drafting 050 should be taken in the first semester of study.

^IT 151 Vocational Math.

Drafting Technician

DRFT 045 Introduction to Computer-Aided Drafting (CAD) <i>Course Advisory: SCC minimum English and math standards; DRFT 050; drafting experience helpful.</i> Designed to introduce the drafting student to CAD technology and terminology. The student shall complete a series of related drawing problems using a CAD work station. Repeatable 1 time. <i>Two hours lecture, four hours lab.</i>	3.0 Units	DRFT 050 Basic Drafting <i>Course Advisories: SCC minimum English and math standards.</i> Presents the fundamentals of drafting, including the use of instruments, lettering, freehand sketching, orthographic projection, dimensioning and sectioning. Recommended for non-majors and drafting majors. <i>Two hours lecture, four hours lab.</i>	3.0 Units
DRFT 045A Introduction to Computer-Aided Drafting (CAD) - Part 1 <i>Course Advisory: DRFT 050 or drafting experience helpful; SCC minimum English and math standards.</i> Designed to introduce the drafting student to CAD technology and terminology. The student shall complete a series of related drawing problems using a CAD work station. Repeatable 1 time. <i>One hour lecture, two hours lab.</i>	1.5 Units	DRFT 055 Mechanical Drafting Level I <i>Prerequisite: DRFT 050 and DRFT 045. Course Advisories: SCC minimum English and math standards.</i> Emphasizes sectioning, pictorials, threads, fasteners, springs, tolerancing, measurement, and working drawings. <i>Two hours lecture, four hours lab.</i>	3.0 Units
DRFT 045B Introduction to Computer-Aided Drafting (CAD) - Part 2 <i>Prerequisite: DRFT 045A. Course Advisory: DRFT 050 or drafting experience helpful. SCC minimum English and math standards.</i> Designed to introduce the drafting student to CAD technology and terminology. The student shall complete a series of related drawing problems using a CAD work station. Repeatable 1 time. <i>One hour lecture, two hours lab.</i>	1.5 Units	DRFT 056 Descriptive Geometry <i>Prerequisites: DRFT 050; IT 151; DRFT 045. Course Advisories: SCC minimum English and math standards.</i> Presents fundamental principles of descriptive geometry and their application to the solution of three dimensional problems. Included are true lengths and shapes; bearing and slopes; point, line and shape problems, advanced auxiliaries, revolutions, intersections and developments. <i>Two hours lecture, four hours lab.</i>	3.0 Units
DRFT 046 Advanced Computer Aided Drafting (CAD) <i>Prerequisite: DRFT 045 and DRFT 050. Course Advisories: SCC minimum English and math standards.</i> Designed to develop advanced proficiency in CAD. Covers symbol libraries, isometrics, external references (XREFS), 3-D drawing, basic solid modeling, tables and customization techniques. Repeatable 1 time. <i>Two hours lecture, four hours lab.</i>	3.0 Units	DRFT 057 Mechanical Drafting Level II <i>Prerequisites: DRFT 055 with a grade of 'C' or better; IT 151 (may be taken concurrently). Course Advisories: SCC minimum English and math standards.</i> A continuation of Drafting 55, with special emphasis on geometric tolerancing, gears, cams, electro-mechanical packaging, and advanced working drawings. <i>Two hours lecture, four hours lab.</i>	3.0 Units
DRFT 046A Advanced CAD—Part 1 <i>Prerequisites: DRFT 045 (or DRFT 045B) and DRFT 050. Course Advisories: SCC minimum English and math standards.</i> Designed to develop advanced proficiency in CAD. Covers symbol libraries, isometrics, external references (XREFS), 3-D drawing, basic solid modeling, tables and customization techniques. Repeatable 1 time. <i>One hour lecture, two hours lab.</i>	1.5 Units	DRFT 060 Architectural Drafting I <i>Prerequisites: DRFT 050 and DRFT 045. Course Advisories: SCC minimum English and math standards.</i> Practice in drawing a complete set of plans for a single family dwelling in accordance with local building regulations. Includes an introductory unit on heat loss computations. Recommended for non-majors and drafting majors. <i>Two hours lecture, four hours lab.</i>	3.0 Units
DRFT 046B Advanced CAD - Part 2 <i>Prerequisite: DRFT 046A. Course Advisories: SCC minimum English and math standards.</i> Designed to develop advanced proficiency in CAD. Covers symbol libraries, isometrics, external references (XREFS), 3-D drawing, basic solid modeling, tables and customization techniques. Repeatable: 1 time. <i>One hour lecture, two hours lab.</i>	1.5 Units	DRFT 065 Architectural Drafting II <i>Prerequisites: DRFT 060 with a grade of 'C' or better; IT 151 (IT 151 may be taken concurrently). Course Advisories: SCC minimum English and math standards.</i> Introduction to the trade terms, detailing and basic construction practices related to light commercial design and delineation. <i>Two hours lecture, four hours lab.</i>	3.0 Units

Drafting Technician

DRFT 070 Technical Illustration and Design <i>Prerequisite: DRFT 050; DRFT 045. Course Advisory: SCC minimum English and math standards.</i> Designed for advanced drafting students to develop the basic tools, skills and concepts required in the field of engineering illustration. Includes freehand sketching and pencil shading. CAD drawings include isometric, perspective assembly, photo-tracing and cut-away drawings. <i>Two hours lecture, four hours lab.</i>	3.0 Units	DRFT 092 Special Problems <i>Prerequisite: DRFT 050.</i> Individualized projects for advanced students who demonstrate competency to carry out individual work. Repeatable 3 times. <i>Three to nine hours weekly by arrangement.</i>	1.0 to 3.0 Units
DRFT 075 Electronic Drafting <i>Prerequisites: DRFT 050 and DRFT 045. Course Advisory: SCC minimum English and math standards.</i> 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, and basic printed circuit board design. <i>Two hours lecture, four hours lab.</i>	3.0 Units	DRFT 125 Solid Modeling <i>Course Advisory: SCC minimum English and math standards; DRFT 050 or knowledge of drafting concepts.</i> This course is designed to teach the basic concepts and skills necessary to create, view, and manipulate objects in three dimensional space using Solidworks software. Repeatable 1 time. <i>Two hours lecture, four hours lab.</i>	3.0 Units
DRFT 079 Blueprint Reading <i>Course Advisories: SCC minimum English and math standards.</i> Designed to provide understanding and interpretation of a variety of blueprints. Emphasizes the ability to recognize and identify modern industrial blueprints and architectural blueprints. Includes basic development of freehand sketching abilities. <i>Three hour lecture, one hour lab.</i>	3.0 Units	DRFT 130 Electronic Drafting With CAD <i>Prerequisite: DRFT 075. Course Advisories: SCC minimum English and math standards.</i> 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. <i>Two hours lecture, four hours lab.</i>	3.0 Units
DRFT 080 Civil Drafting I <i>Prerequisites: DRAFT 50 and DRAFT 45. Course Advisory: SCC minimum English and math standards; IT 151 recommended.</i> Introductory course in civil drawing with emphasis on land division, breakdown of survey notes, office procedures and related math computations. Included is an introductory unit on modern CAD applications, as applied to preliminary and final maps. <i>Two hours lecture, four hours lab.</i>	3.0 Units	DRFT 135 Structural and Detail Drafting <i>Course Advisories: SCC minimum English and math standards.</i> Provides a basic introduction to structural detailing. Covers basic terminology, shapes, types of connections, types of views, scaling and proportion, bills of materials and lettering, plus some detailing problems. <i>Five hours lecture, two hours weekly by arrangement (3 week course).</i>	1.0 Unit
DRFT 085 Civil Drafting II <i>Prerequisites: DRFT 080; IT 151. Course Advisory: SCC minimum English and math standards.</i> 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 earth-work calculations. <i>Two hours lecture, four hours lab.</i>	3.0 Units	DRFT 140 Surveying <i>Prerequisites: DRFT 080 and IT 151. Course Advisory: SCC minimum English and math standards.</i> Presents the fundamentals of plane surveying with practice in the field using tape, levels, transit and theodolite. <i>Two hours lecture and four hours lab.</i>	3.0 Units
		DRFT 150 Computer Graphics for Non-Drafters <i>Course Advisory: SCC minimum English standard.</i> Provides the opportunity for the non-drafting major to explore the creation of graphic images using the PC as a tool. <i>One hour lecture, three hours lab (8 week course).</i>	1.0 Unit

DRFT Special Topics

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.

Early Childhood Education

(For Dramatic Arts-See "Theatre Arts")

Program Description

This program prepares students to meet the new and stringent demands of today's child care centers, preschool programs, and nursery schools. It offers a comprehensive study of the development of the young child as well as opportunities to learn techniques to enhance the emotional, physical, social, and cognitive needs of the child.

Certificate of Achievement and Associate in Science Degree

A Certificate of Achievement can be obtained upon successful completion of the 32-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 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 Certificate of Achievement/Associate Degree will be able to:

1. Child Development Theory, Research, Current Trends
2. Reflective Practice, Self Awareness
3. Contextual Development: Family, Culture, Community & Meaningful Relationships.
4. Curriculum Development based on Observations and Assessment.

Required Courses

Students should enroll in HUDV 038 during their first semester in the program. Students will spend their first semester of ECE Practicum I (ECE 065) assigned to the Solano College Children's Program or placed off campus with an accepted mentor teacher. A second semester may be spent either on campus (ECE 066 or 067) or off campus (ECE 067). Off campus placements will be made with an approved mentor teacher. Prior to the first week of enrollment in ECE 065 or 066, students will be required to be fingerprinted at District expense.

Required Courses	Units
ECE 062 Introduction to Early Childhood Education	3
ECE 063 Early Childhood Education Theory and Practice	3
ECE 065 Early Childhood Education Practicum I	4
ECE 066 Early Childhood Education Practicum II	4
<i>or</i>	
ECE 067 Early Childhood Education Field Practice	4
ECE 070 Science for Early Childhood Education	3
ECE 071 Language and Literature for ECE	3
ECE 072 Art for Early Childhood	3
ECE 073 Music for Early Childhood	3
HUDV 038 Child Development	3
HUDV 050 Child, Family and Community	3
Total Units	32

Recommended Electives

ECE 079 Adult Supervision: The Mentor Teacher
ECE 099 Early Childhood Education Honors
ECE 101 Sensitive & Critical Topics in ECE
ECE 102 Curriculum Development
HUDV 040 Family Relationships
HUDV 053 Teaching in a Diverse Society
NUTR 010 Nutrition
NUTR 051 Nutrition Basics for Children
NUTR 052 Child Nutrition for Early Childhood Education
OCED 090 Occupational Work Experience
OCED 091 General Work Experience
PSYC 001 Introduction to Psychology
SOCS 022 Ethnic, Racial and Minority Group Relations in Harmony and Conflict
SOC 001 Introduction to Sociology

Early Childhood Education

ECE 050 Violence and its Impact on Children and Their Families <i>Course Advisories: SCC minimum English and math standards.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ECE 064 Observation and Assessment <i>Course Advisory: HUDV 038; Minimum English and Math standards.</i> This course focuses on the appropriate use of assessment and observation strategies to document children's development, growth, play and learning. Recording strategies, rating systems, portfolios, and multiple assessments provide tools for professionals to work with families to promote children's success. <i>Three hours lecture.</i>	3.0 Units
ECE 051 Intro/Violence Intervention & Strategies for Child/Families <i>Course Advisories: SCC minimum English and math standards.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ECE 065 Early Childhood Education Practicum I <i>Prerequisites: ECE 062 and ECE 063 (ECE 063 may be taken concurrently). Course Advisories: SCC minimum English and Math standard.</i> Supervised laboratory experience with infants through preschool children in the Solano College Children's Programs or off-campus placement with a mentor teacher selected by the SCC Mentor Selection Committee for nine hours per week and attendance at a one-hour weekly seminar which emphasizes child observation, guidance techniques, reflective practice, and relationship of theories to practices. 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. <i>One hour lecture, nine hours by arrangement.</i>	4.0 Units
ECE 055 Key Concepts in Early Childhood Education <i>Course Advisory: SCC minimum English standard.</i> Focuses on those aspects of young children's normal behavior and needs which have the greatest significance for adults studying children in a preschool setting. May be repeated to a maximum of 1 unit, including initial enrollment. One-half or <i>One hour lecture.</i>	.5 or 1.0 Units	ECE 066 Early Childhood Education Practicum II <i>Prerequisites: ECE 065. Course Advisories: SCC minimum English and Math standard.</i> Laboratory practicum emphasizing curriculum activities, comprehensive 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. During the first week of enrollment student will be required to be fingerprinted and have a TB test at the District's expense. <i>One hour lecture, nine hours by arrangement.</i>	4.0 Units
ECE 062 Introduction to Early Childhood Education <i>Prerequisite: HUDV 038 (may be taken concurrently). Course Advisories: SCC minimum English and math standards.</i> An introduction to teaching at the preschool level including: history, philosophy, techniques of guidance, teaching techniques and skills, schedules and programming routines, provision of a safe environment, the function and stages of play, and an overview of important developmental processes. <i>Three hours lecture.</i>	3.0 Units	ECE 067 Early Childhood Education Field Practice <i>Prerequisites: ECE 065. Course Advisories: SCC minimum English and math standards.</i> Work experience at an approved early childhood job site under the direct supervision of a fully qualified ECE teacher (preferably under the supervision of one of the SCC selected Mentor teachers), and attendance at a one-hour weekly seminar on campus which emphasizes child observation, curriculum planning, and relationships of theories to practices. <i>One hour lecture (related seminar), twenty hours weekly by arrangement (work experience).</i>	4.0 Units
ECE 063 Early Childhood Education Theory and Practice <i>Prerequisite: ECE 062 and HUDV 038. Course Advisories: SCC minimum English and math standards.</i> Continues the introduction to early childhood teaching begun in ECE 062 with the focus on the content of the early childhood curriculum areas of art, music, science, math, dramatic play, motor development and language and academic skills. Students practice techniques of curriculum planning by preparing lesson plans in each of these areas. <i>Three hours lecture.</i>	3.0 Units		

Early Childhood Education

ECE 070 Science for Early Childhood Education <i>Prerequisite: ECE 062; HUDV 038 (may be taken concurrently). Course Advisories: SCC minimum English and math standards.</i> 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. Field trip may be required. <i>Three hours lecture.</i>	3.0 Units	ECE 076 Care of Infants and Toddlers: Curriculum and Environments <i>Course Advisory: SCC minimum English and Math standards.</i> 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. <i>Three hours lecture.</i>	3.0 Units
ECE 071 Language and Literature for ECE <i>Prerequisites: HUDV 038 (may be taken concurrently). Course Advisory: SCC minimum English standard.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ECE 079 Adult Supervision: The Mentor Teacher <i>Prerequisite: "C" or better in HUDV 038 & 050, ECE 062. Course Advisory: Minimum SCC Math standard and eligibility for ENGL 001.</i> Three years teaching experience and moving into a supervisory position. 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. <i>Two and three-quarters hours</i> (12 week course).	2.0 Units
ECE 072 Art for Early Childhood <i>Course Advisories: SCC minimum English and math standards.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ECE 080 Early Childhood Administration <i>Prerequisites: ECE 062 and HUDV 038. Course Advisory: Eligibility for ENGE 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units
ECE 073 Music for Early Childhood <i>Course Advisories: ECE 062; SCC minimum English and Math standards.</i> 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. Field trip may be required. <i>Three hours lecture.</i>	3.0 Units	ECE 081 Early Childhood Staff Supervision <i>Prerequisites: ECE 062; HUDV 038 and HUDV 050. Course Advisory: Completion of ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units
ECE 075 Care of Infants and Toddlers: Social-Emotional Foundations <i>Course Advisories: Eligibility for ENGL 001 and SCC minimum Math standard.</i> 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. <i>Three hours lecture.</i>	3.0 Units		

Early Childhood Education

ECE 085 Educational Games <i>Course Advisory: SCC minimum English standard.</i> An intensive introduction to planning and producing educational learning games for preschool-aged children suited for use in home, day care, and/or preschool settings. Successful completion requires attendance, participation and the completion of a minimum of two (2) cognitive games. This is a credit/no-credit only course. Repeatable 3 times. <i>One hour lecture.</i>	.5 Unit	ECE 200 ECE Mentor Teacher Seminar <i>Prerequisite: Selection as a Mentor Teacher with the California Mentor Teacher Program. Course Advisories: SCC English and math standards.</i> A monthly seminar for Early Childhood Mentor Teachers to explore issues related to their roles as supervisors or early childhood student teachers. Seminar content will be individualized to meet the needs of each mentor. Participation and attendance in the monthly meeting is mandatory. <i>Eight hours lecture total for semester.</i>	.5 Unit
ECE 099 ECE Honors <i>Prerequisites: 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 Division Dean based on instructor availability. Course Advisory: SCC minimum English standard.</i> 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. May be repeated to a maximum of 6 units, including initial enrollment. <i>Three to nine hours weekly by arrangement.</i>	1.0 to 3.0 Units	ECE 501 Early Childhood Education Children's Programs <i>Course Advisory: SCC minimum English standard.</i> 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. Repeatable 3 times. <i>Sixteen hours by arrangement total for the semester.</i>	Non-Credit
ECE 101 Sensitive and Critical Topics in Early Childhood Education <i>Course Advisory: SCC minimum English standard.</i> 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. Repeatable 3 times. <i>Eight hours lecture total for semester.</i>	.5 Unit	ECE 550 Positive Parenting Practices Focuses on those aspects of young children's normal behavior and needs which have the greatest significance for parents and others interested in behavior of young children. <i>Three hours lecture</i> (8 week course).	Non-Credit
ECE 102 Curriculum Development <i>Course Advisory: SCC minimum English and Math standards.</i> 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. Repeatable 3 times. <i>Eight hours lecture total for semester.</i>	.5 Unit	ECE Special Topics 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.	
ECE 105 Parenting in a Stressful World Advisory: 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. Repeatable 3 times. <i>Eight hours lecture total for semester.</i>	.5 Unit		

Economics

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.

The economic courses provide the lower-division requirements for students majoring in economics, business, computer science, and engineering. These courses also provide students majoring in other fields with an understanding of economic principles and a familiarity with the economic institutions that affect our lives.

Associate Degree

Not offered in this discipline

ECON 001 **3.0 Units**
Principles Of Economics (Macroeconomics)
Course Advisories: Eligibility for ENGL 001; SCC minimum math standard. Introductory course dealing with the nature and scope of economics, supply and demand analysis, national income accounting, Keynesian models, money and banking, fiscal and monetary policy, stabilization methods, and current problems and issues. Emphasis on Macroeconomics. Online work may be required. *Three hours lecture.*

ECON 002 **3.0 Units**
Principles Of Economics (Microeconomics)
Course Advisories: Eligibility for ENGL 001; SCC minimum math standard. Introductory course dealing with the price and output determination, cost of production, market structures, anti-trust regulations, and international trade. Emphasis on Microeconomics. Online work may be required. *Three hours lecture.*

ECON 010 **3.0 Units**
Global Economics
Course Advisory: SCC minimum Math standard and Eligibility for ENGL 001. 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 lecture hours.*

Electronics

(For Education-See "Liberal Arts")

Program Description

Designed to prepare the student for employment in industry by providing an extensive background in electronics theory with laboratory application. Employment would be at the level of entry-level technologist/technician or engineering assistant.

Certificate of Achievement and Associate in Science Degree

A Certificate of Achievement can be obtained by completing the 35-unit major. The Associate in Science Degree can be obtained by completing a total of 60 units, including the 35-unit 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

This information is not available at the time of printing. Please check online for current information as it is available.

Required Courses

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

	Units
ECTN 050 DC Electronics Principles	4
ECTN 051 AC Electronics Principles	4
ECTN 052 Semiconductor Devices and Circuits	4
ECTN 053 Communications and Operational Amplifiers	4
ECTN 060 Basic Digital Fundamentals	4
ECTN 061 Digital Systems: Principles and Applications	4
ECTN 140 Mathematics for Electronics	4
ECTN 141 Mathematics for Electronics	4
MT 162 Robotic Manufacturing Systems	3
Total Units	35

Recommended Electives

	Units
DRFT 050 Basic Drafting	3
ECTN 102 Electrical Safety	1 - 3
ECTN 111 Fundamentals of Wire and Cabling	1
ECTN 112 Fundamentals of Fiber Optics	1
ECTN 113 Fundamentals of Wireless Communication	1
ECTN 171 Security and Surveillance Techniques	4
ENGL 051 Technical Writing	3
IT 140 Industrial Materials	3
OCEC 090 Occupational Work Experience	1 - 8
OCEC 091 General Work Experience	1 - 6

Advanced standing may be granted for ECTN 050 and/or ECTN 051 or ECTN 060 by achieving a satisfactory score on a written test. The test may not be retaken.

Students may substitute:

ECTN 132 and 133 for ECTN 140
ECTN 134 and 135 for ECTN 141

Computer Investigations Job-Direct Certificate

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

Required Courses	Units
CIS 001 Introduction to Computer Science	3
CJ 051 Criminal Investigation	3
ECTN 172 Computer Forensics: Evidence Recovery	1.5
ECTN 173 Computer Forensics Investigations	3
ECTN 174 Computer Forensics: Operating Systems Internals	3
Total Units	13.5

Computer Information Security Job-Direct Certificate

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

Required Courses	Units
ECTN 122 Computer Network+ Technology	4
ECTN 124 Computer Security+ Technology	4
ECTN 126 A+ Computer Hardware Technology	4
ECTN 128 A+ Computer Operating Systems Technology	4
Total Units	16

Electronics

**Electronic Security and Surveillance Technician
Job-Direct Certificate**
The required courses must be completed with a grade of
"C" or better.

Required Courses	Units
CJ 001 Introduction to Criminal Justice	3
ECTN 111 Fundamentals of Wire and Cabling	1
ECTN 112 Fundamentals of Fiber Optics	1
ECTN 113 Fundamentals of Wireless Communication	1
ECTN 171 Security and Surveillance Techniques	4
Total Units	10

Home Technology Integrator Job-Direct Certificate
The required courses must be completed with a grade
"C" or better.

Required Courses	Units
IT 160 Electrical Fundamentals	3
ECTN 111 Fundamentals of Wire and Cabling	1
ECTN 112 Fundamentals of Fiber Optics	1
ECTN 113 Fundamentals of Wireless Communication	1
ECTN 175 Home Technology Integration Techniques	4
Total Units	10

ECTN 050 **4.0 Units**
DC Electronic Principles
Prerequisites: ECTN 132 or ECTN 140 (either may be taken concurrently). Course Advisory: SCC minimum English standard. Presents the principles of direct current and passive devices, and introduces active devices. Mathematical analysis and laboratory construction of circuits are required. *Three hours lecture, three hours lab.*

ECTN 051 **4.0 Units**
AC Electronic Principles
Prerequisite: ECTN 050 and ECTN 133 or ECTN 140 (all may be taken concurrently). Course Advisory: SCC minimum English and math standards. Presents the principles of alternating current circuits and active devices. Mathematical analysis and laboratory construction of circuits are required. *Three hours lecture, three hours lab.*

ECTN 052 **4.0 Units**
Semiconductor Devices and Circuits
Prerequisites: ECTN 051 and ECTN 134 or ECTN 141 (ECTN 134 or 141 may be taken concurrently). Course Advisory: SCC minimum English standard. Presents the principles of discrete semiconductor devices and circuits. Mathematical analysis and laboratory constructions of circuits required. *Three hours lecture, three hours lab.*

ECTN 053 **4.0 Units**
Communications and Operational Amplifiers
Prerequisite: ECTN 052 and ECTN 135 or ECTN 141 (ECTN 135 or 141 may be taken concurrently). Course Advisory: SCC minimum English standard. Presents the principles of operational amplifier circuits, discrete and integrated communications circuits, and AM/FM transmitters and receivers. Mathematical analysis and laboratory construction are required. *Three hours lecture, three hours lab.*

ECTN 060 **4.0 Units**
Basic Digital Fundamentals
Course Advisories: SCC minimum English and math standards. Presents the principles of digital numbering systems, digital codes, logic gates, and flip-flops; an introductory course in Boolean Algebra and digital electronics. Mathematical analysis and laboratory assignments are required. *Three hours lecture, three hours lab.*

ECTN 061 **4.0 Units**
Digital Systems: Principles and Applications
Prerequisite: ECTN 060 (may be taken concurrently). Course Advisory: SCC minimum English standard. Presents the principles of counter circuits, registers, memories, arithmetic logic, integrated circuits, and digital computer introduction. Mathematical analysis and laboratory assignments are required. *Three hours lecture, three hours lab.*

ECTN 101 **3.0 Units**
Introduction to Electricity and Electronics
Prerequisite: None. NOTE: Not open for credit to students who have taken ECTN 050 or 051. Course Advisories: SCC minimum math and English standards. An introductory study of electrical and electronic technology. Fundamentals of DC and AC circuitry components. Instruments used in the study of basic electronics will be discussed and demonstrated with an emphasis on interpretation of schematic diagrams, breadboarding, and familiarization of electronic components. *Two hours lecture, three hours lab.*

ECTN 102 **1.0 to 3.0 Units**
Electrical Safety
Course Advisories: SCC minimum math and English standards. A survey of the proper use, handling, and hazards associated with electrical and electronic equipment. The student will be introduced to the current generally accepted (National Electrical Safety Code) safety practices and procedures associated with power transmission, industrial, and consumer electrical and electronic equipment. This is an open entry-open exit course. Repeatable for up to 3 units. *One to Three hours lecture.*

Electronics

ECTN 111 Fundamentals of Wire and Cabling <i>Course Advisories: SCC minimum English and math standards.</i> Presents the principles and practices of copper cable wiring technology. Includes instruction in the design, installation, and maintenance of copper wiring systems for intelligent control systems, lighting and appliance control devices, communication and networking. Also includes instruction in household and institutional power wiring. <i>One hour lecture, one hour lab.</i>	1.0 Unit	ECTN 124 Computer Security+ Technology <i>Prerequisite: ECTN 122. Course Advisories: SCC minimum English and math standards.</i> 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. <i>Three hours lecture, three hours lab.</i>	4.0 Units
ECTN 112 Fundamentals of Fiber Optics <i>Course Advisories: SCC minimum English and math standards.</i> Presents the principles and practices of fiber optics and optoelectronic technology. Includes instruction in the design, installation, and maintenance of fiber optic cabling and control systems and optoelectronic control systems for computer communication and networking systems. <i>One hour lecture, one hour lab.</i>	1.0 Unit	ECTN 126 A+ Computer Hardware Technology <i>Course Advisories: SCC minimum English and math standards.</i> 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. <i>Three hours lecture, three hours lab.</i>	4.0 Units
ECTN 113 Fundamentals of Wireless Communication <i>Course Advisories: SCC minimum English and math standards.</i> Presents the principles and practices of wireless communication technology. Includes instruction in the design, installation, and maintenance of wireless communication and network systems. Emphasis is placed on system reliability, security, and cost containment concerns. <i>One hour lecture, one hour lab.</i>	1.0 Unit	ECTN 128 A+ Computer Operating Systems Technology <i>Course Advisories: ECTN 126, SCC minimum English and math standards.</i> 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. <i>Three hours lecture, three hours lab.</i>	4.0 Units
ECTN 122 Computer Network+ Technology <i>Course Advisories: SCC minimum English and math standards.</i> 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. <i>Three hours lecture, three hours lab.</i>	4.0 Units	ECTN 132 Mathematics for Electronics <i>Prerequisite: None. NOTE: Not open to students who have completed ECTN 140. Course Advisories: SCC minimum English and math standards.</i> Presents the principles of algebra as it applies to electronics. Frequent homework assignments and written tests are required. <i>Four hours lecture (8 week course).</i>	2.0 Units
		ECTN 133 Mathematics for Electronics <i>Prerequisite: ECTN 132. NOTE: Not open to students who have completed ECTN 140. Course Advisories: SCC minimum English and math standards.</i> Presents the principles of algebra, graphs and determinants as they apply to electronics. Frequent homework assignments and written tests are required. <i>Four hours lecture (8 week course).</i>	2.0 Units

Electronics

ECTN 134 Mathematics for Electronics <i>Prerequisite: ECTN 133 with a grade of 'C' or better. NOTE: Not open to students who have completed ECTN 141. Course Advisories: SCC minimum English and math standards.</i> Presents the principles of trigonometry as it applies to electronics. Frequent homework assignments and written tests are required. <i>Four hours lecture</i> (8 week course).	2.0 Units	ECTN 172 Computer Forensics: Evidence Recovery <i>Course Advisories: SCC minimum English and math standards.</i> 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. (Same as CIS 172) <i>One hour lecture, one and one-half hours lab.</i>	1.5 Units
ECTN 135 Mathematics for Electronics <i>Prerequisite: ECTN 134. NOTE: Not open to students who have completed ECTN 141. Course Advisories: SCC minimum English and math standards.</i> Presents the principles of number systems and Boolean Algebra as they apply to electronics. Frequent homework assignments and written tests are required. <i>Four hours lecture</i> (8 week course).	2.0 Units	ECTN 173 Computer Forensics Investigations <i>Prerequisite: CIS 001. Course Advisory: Eligibility for ENGL 001; SCC minimum math standard.</i> 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. (Same as CIS 173) <i>Two hours lecture, three hours lab.</i>	3.0 Units
ECTN 140 Mathematics for Electronics <i>Prerequisite: None. NOTE: Not open to students who have completed ECTN 132 & 133. Course Advisories: SCC minimum English and math standards.</i> Presents the principles of algebra, graphs and determinants as they apply to electronics. Frequent homework assignments and written tests required. <i>Four hours lecture.</i>	4.0 Units	ECTN 174 Computer Forensics: Operating Systems Internals <i>Prerequisite: ECTN 173 with a grade of 'C' or better or CIS 073 with a grade of 'C' or better. Course Advisories: SCC minimum English and math standards.</i> 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. (Same as CIS 174) <i>Two hours lecture, three hours activity.</i>	3.0 Units
ECTN 141 Mathematics for Electronics <i>Prerequisite: ECTN 140 with a grade of 'C' or better. NOTE: Not open to students who have completed ECTN 134 & 135. Course Advisories: SCC minimum English and math standards.</i> Presents the principles of trigonometry, vectors, and number systems as they apply to electronics. Frequent homework assignments and written tests are required. <i>Four hours lecture.</i>	4.0 Units	ECTN 175 Home Technology Integration Techniques <i>Course Advisory: SCC minimum English and math standards.</i> Presents the principles and practices of installing and maintaining home technology. Student is exposed to home lighting controls, computer networking, home security, home entertainment systems including video, data, and voice, heating ventilation and air conditioning control systems, and home systems integration. <i>Three hours lecture, three hours lab.</i>	4.0 Units
ECTN 158 Microcomputer Maintenance <i>Course Advisory: SCC minimum English standard.</i> Presents data on component parts of computer systems, personal computer configuration for memory expansions, and input/output ports, and proper insertion/removal procedures for circuit boards and components. <i>Three hours lecture, one hour lab</i> (8 week course).	1.5 Units		
ECTN 171 Security and Surveillance Techniques <i>Course Advisory: SCC minimum English and math standards.</i> An overview of the principles and practices of the security and surveillance industry. Students are introduced to the modern methods used to secure physical property through electronic means. Students are introduced to the modern methods of gathering surveillance information through both covert and overt electronic means. Emphasis is placed on legal and ethical practices. <i>Three hours lecture, three hours lab.</i>	4.0 Units		

Electronics

ECTN 176 **4.0 Units**

Digital Home Technology Integration

Course Advisories: SCC minimum English and math standards. Presents the principles and practices of installing and maintaining digital home technology. Student is exposed to home computer networking systems and computer controlled home automation systems, telephone systems as well as voice over Internet protocol, troubleshooting and documentation. Prepares the student for DHTI+ certification. Safety training will be incorporated throughout the course. *Three hours lecture; three hours lab.*

ECTN 190 **1.5 Units**

Home Technology Integration Instructional Strategies

Course advisory: SCC minimum English and math standards. Designed to provide instructors of home technology integration (HTI) courses with the tools necessary to successfully facilitate curriculum, administer learning, and apply instructional materials and equipment to the classroom setting. Emphasis is placed on the synthesis and evaluation of vendor provided HTI student materials and the transfer of demonstration and instruction skills of HTI technology. Students will receive a solid overview of the learning necessary to teach HTI courses as well as experience in a working HTI instructional laboratory. Safety training will be incorporated throughout the course. *One hour lecture, two hours lab.*

ECTN 212 **1.0 Unit**

FCC License Preparation

Course Advisories: ECTN 053, SCC minimum English standard. Computer-aided instruction and laboratory study of Elements I, II, III of the FCC License for Commercial Radio Operators. This is a credit/no credit only course. Repeatable 2 times. *Three hours lab.*

ECTN 213 **1.0 Unit**

FCC License Preparation

Course Advisories: ECTN 53, SCC minimum English standard. Computer-aided instruction and laboratory study of Element IV of the FCC License for Commercial Radio Operators. This is a credit/no credit only course. Repeatable 2 times. *Three hours lab.*

ECTN Special Topics

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.

Engineering

(For Emergency Medical Technician I-See "Nursing")

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 Advisories: Eligibility for enrollment in ENGL 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

Corequisite(s): MATH 023 Prerequisite(s): PHYS 007 with a grade "C" or better. Course Advisory: Eligibility for ENGL 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(s): MATH 021, PHYS 006 with a grade of "C" or better. Course Advisory: Eligibility for ENGL 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

Prerequisites: PHYS 006 and CHEM 001. Course Advisory: Eligibility for ENGL 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

Program Description

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, the latter of which is presented through genre, survey, figure, and thematic courses.

Associate in Arts Degree

The Associate in Arts Degree can be obtained by completing a total of 60 units, including the 18-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 an 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, such as the ability to use texts to generate and analyze arguments, collect, evaluate and synthesize evidence and proofs, and to understand the value of critical thinking and its applications.
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 creative writing potential including 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 3

One genre course from the list below: Units

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

Two survey courses from the list below: Units

ENGL 030 Survey of American Literature I 3
ENGL 031 Survey of American Literature II 3
ENGL 040 Survey of English Literature 3
ENGL 041 Survey of English Literature 3
Total Units 18

Recommended Electives

ENGL 004 Critical Thinking and Composition:
Language in Context

ENGL 005 Advanced Composition
ENGL 006 Creative Writing 1
ENGL 007 Creative Writing II
ENGL 012 Modern Women Writers
ENGL 016 Masterpieces of Western World Literature
ENGL 018 Introduction to Mythology
ENGL 021 * Introduction to Poetry
ENGL 023 * Introduction to the Modern Novel
ENGL 024 * Introduction to the Short Story
ENGL 025 * Introduction to Drama as Literature
ENGL 030 * Survey of American Literature I
ENGL 031 * Survey of American Literature II
ENGL 032 Introduction to Native American Literature
ENGL 033 Survey of African American Literature
in the United States
ENGL 034 African American Novel and Drama
in the United States
ENGL 035 Latina/o Literature
ENGL 036 Multi-Ethnic Literature in America
ENGL 037 Survey of Asian American Literature
ENGL 040 * Survey of English Literature
ENGL 041 * Survey of English Literature
ENGL 044 Introduction to Shakespeare
ENGL 049 English Honors
ENGL 058 Creative Writing: The Literary Magazine
AMST 001 An Interdisciplinary Study of American Culture
AMST 002 An Interdisciplinary Study of American Culture

* If not previously taken for the major

English

- ENGL 001** **3.0 Units**
College Composition
Corequisite: LR 010. *Prerequisite(s):* 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 "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. 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. Students are required to write 6-10 essays, one of which may be a research paper, based on essays, literature read in class, and/or personal experience. *Three hours lecture.*
- ENGL 002** **3.0 Units**
Critical Thinking and Writing About Literature
Prerequisite: ENGL 001 with a grade of 'C' or better. 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. *Three hours lecture.*
- ENGL 004** **3.0 Units**
Critical Thinking and Composition: Language In Context
Prerequisite: ENGL 001. *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 it requires students to write their own analytical and argumentative essays. Essay examinations and critical papers are required. *Three hours lecture.*
- ENGL 005** **3.0 Units**
Advanced Composition
Prerequisite: ENGL 001 with a grade of 'C' or better. 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. An introductory study of creative writing techniques. Students develop self-expression through writing and through individual and class criticism of student work. Frequent writing is required. *Three hours lecture.*
- ENGL 007** **3.0 Units**
Creative Writing II
Prerequisite: ENGL 006. *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. Repeatable 2 times. *Three hours lecture.*
- ENGL 012** **3.0 Units**
Modern Women Writers
Prerequisite: ENGL 001. 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 013** **3.0 Units**
Mystery Fiction
Prerequisite: ENGL 001. Examines the origins of mystery fiction and the great fictional detectives, surveys the various schools of mystery fiction, and explores reader fascination with crime and detection in fiction. *Three hours lecture.*
- ENGL 014** **3.0 Units**
The Bible As Literature
Prerequisite: ENGL 001. 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. 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.*

English

ENGL 018 Introduction to Mythology <i>Prerequisite: ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ENGL 031 Survey of American Literature II <i>Prerequisite: ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units
ENGL 021 Introduction to Poetry <i>Prerequisite: ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ENGL 032 Introduction to Native American Literature <i>Prerequisite: ENGL 001.</i> A study of representative literature by various Native American writers. Critical papers and written examinations are required. <i>Three hours lecture.</i>	3.0 Units
ENGL 023 Introduction to the Modern Novel <i>Prerequisite: ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ENGL 033 Survey of African American Literature in the United States <i>Prerequisite: ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units
ENGL 024 Introduction to the Short Story <i>Prerequisite: ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ENGL 034 African American Novel and Drama in the United States <i>Prerequisite: ENGL 001.</i> Through the in-depth study of novels and plays by African American writers, the course examines the sociopolitical effect on the works and the influence this literature has had on mainstream American literature. Critical papers and examinations are required. <i>Three hours lecture.</i>	3.0 Units
ENGL 025 Introduction to Drama as Literature <i>Prerequisite: ENGL 001.</i> 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. (CAN ENGL 22). <i>Three hours lecture.</i>	3.0 Units	ENGL 035 Latina/o Literature <i>Prerequisite: ENGL 001.</i> Study of literature written by Latinas/os, including short stories, novels, poetry and drama. Written examinations and critical papers are required. <i>Three hours lecture.</i>	3.0 Units
ENGL 030 Survey of American Literature I <i>Prerequisite: ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units	ENGL 036 Multi-Ethnic Literature in America <i>Prerequisite: ENGL 001.</i> 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. <i>Three hours lecture.</i>	3.0 Units
		ENGL 037 Survey of Asian American Literature <i>Prerequisite: ENGL 001.</i> A study of representative selections of poetry, fiction, short drama, and non-fiction by Asian American writers. The course examines the ethnic context, artistic technique, and literary themes. Critical papers and examinations are required. <i>Three hours lecture.</i>	3.0 Units

English

- ENGL 038** **3.0 Units**
The California Experience in Literature
Prerequisite: ENGL 001. 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
Prerequisite: ENGL 001. 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. *Three hours lecture.*
- ENGL 041** **3.0 Units**
Survey of English Literature
Prerequisite: ENGL 001. 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. *Three hours lecture.*
- ENGL 044** **3.0 Units**
Introduction to Shakespeare
Prerequisite: ENGL 001. 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 046** **3.0 Units**
American Sign Language 1
Prerequisite: Eligibility for ENGL 001. An introductory course on the culture and language of the deaf in this country. The course includes the acquisition of Fingerspelling skills and basic functional vocabulary of ASL. In addition to fluency in these two separate skills, the student will acquire basic knowledge of ASL syntax and nonverbal aspects of ASL, a history of the deaf in the country and deaf education, variations in Manual Communication, and the Culture of the Deaf. There will be both written and signed examinations, a research project, homework assignments, and individual examinations to demonstrate competency in both expressive and receptive ASL. Students will be expected to acquire a vocabulary of approximately 500 words (signs) and be proficient in Fingerspelling. *Three hours lecture.*
- ENGL 047** **3.0 Units**
American Sign Language 2
Prerequisite: ENGL 046. Emphasis is on vocabulary expansion, introduction to ASL idiomatic expressions and information regarding the ethics and process of becoming a sign language interpreter. Assessment of competency is accomplished through written and communicative examination. Some interaction with the deaf population is required. *Three hours lecture.*
- ENGL 049** **1.0 to 3.0 Units**
English Honors
Prerequisites: 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 Division 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. May be repeated to a maximum of 6 units, including initial enrollment. *Three to nine hours weekly by arrangement with instructor and division Dean.*
- ENGL 051** **3.0 Units**
Technical Writing
Prerequisites: 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. 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. Repeatable 1 time. *Three hours lecture.*
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English

- ENGL 064** .5 to 1.5 Units
Writing the Research Paper
Prerequisite: Completion of ENGL 370. Study of the principles and techniques of library research and the writing of the research paper. To earn 1.5 units the student must complete both the research and the writing of an actual paper. May be repeated to a maximum of 1 1/2 units, including initial enrollment. *One to three hours activity.*
- ENGL 087** 1.0 to 2.0 Units
Drama in Performance
Prerequisite: Permission of instructor to confirm opening.
Course Advisory: ENGL 1. Introduction to the principles of drama through a study of plays being presented at the Oregon Shakespearean Festival. Repeatable 3 times. A travel study 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. Repeatable 1 time. This is a credit/no credit only course. *Three hours lecture.*
- ENGL 310** .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. This is an open entry/open exit, credit/no credit only course. May be repeated to a maximum of 6 units, including initial enrollment. *Two hours activity weekly per unit.*
- ENGL 348G** 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 is open to all students, regardless of assessment results or past experience with reading and writing. This is a pass / no pass only course. *Three hours lecture.*
- ENGL 350** 3.0 Units
Reading and Writing Skills for ESL Students
Prerequisite(s): 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.
Corequisite(s): This course must be taken together with 1.5 units of the English 350L. Credit for this course will be given only when the requirements of both components have been completed. 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. This is a Pass/No Pass only course. *Three hours lecture.*
- ENGL 350L** 1.5 Units
English 350 Lab
Corequisite(s): ENGL 350. Repeatability: May be repeated once, for a maximum total of 3 units credit. Students who fail the coreq ENGL 350 twice must enroll in ENGL 310 for individualized instruction. 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. This is a pass/no pass course. *Four and one-half hours Lab.*
- ENGL 355** 3.0 Units
Writing and Reading Skills
Prerequisite(s): 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.
Corequisite(s): This course must be taken together with 1.5 units of 355L. Credit for this course will be given only when the requirements of both components have been completed. 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. This is a Pass/No Pass Course. *Three hours lecture.*
- ENGL 355L** 1.5 Units
English 355 Lab
Corequisite(s): ENGL 355. Repeatability: May be repeated once, for a maximum total of 3 units credit. Students who fail the coreq ENGL 355 twice must enroll in ENGL 310 for individualized instruction. 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 course. *Four and one-half hours Lab.*
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English

ENGL 370 3.0 Units 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 'Credit' and a score of 6 or more on the Composition Mastery Final Examination upon completion of ENGL 305 or 350 or 355. *Corequisite:* ENGL 370L. Credit for the course will be given only when the requirements for all components have been met. *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 course. *Three hours lecture.*

ENGL 370L .5 Unit English Fundamentals Lab

Corequisite(s): ENGL 370. Repeatability: May be repeated once, for a maximum total of one unit credit. Students who fail the coreq ENGL 370 twice must enroll in ENGL 310 for individualized instruction 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. This is a pass/no pass course. *1.5 hours Lab weekly.*

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.*

ENGL Special Topics

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.

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 .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. This is an open entry/open exit, credit/no credit course. May be repeated to a maximum of 6 units, including initial enrollment. *Two hours activity weekly per unit.*

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. Note: This is a credit/no credit only course. Repeatable 1 time. *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. Note: This is a credit/no credit only class. Repeatable 1 time. *Three hours lecture.*

English

English as a Second Language

ESL 006 3.0 Units ESL Composition Skills

Prerequisite: Successful completion of 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 writing, vocabulary acquisition, and related grammar practice. Includes ongoing practice in critical analysis of English paragraph logic. 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. Repeatable 1 time. *Three hours lecture.*

ESL 055 3.0 Units Advanced ESL Reading

Prerequisites: Successful completion of ESL 078 or ESL 079 or ESL Assessment Test Score: Level 1. A class for advanced non-native speakers of English involving the active, problem-solving process of intensive reading and focusing on the coordination of a number of skills to assist the student in drawing information from a content-oriented, college-level text. Students will also practice critical, extensive reading and writing at their individual level and pace using outside texts from the ESL collection at the Solano College Library. Comprehension tasks, exercises, quizzes, a final exam and weekly written journals are required for successful completion. Repeatable 1 time. *Three hours lecture.*

ESL 077 3.0 Units Conversation/Pronunciation Skills

Corequisite: Concurrent enrollment in ESL 077L. Prerequisite: Successful completion of 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 .5 Units ESL 077 Lab

Corequisite(s): 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. Repeatability: May be repeated to a maximum of 6 units, including initial enrollment. *One and one-half hours lab.*

ESL 078 3.0 Units Intermediate ESL Reading

Prerequisite: Successful completion of 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. Repeatable 1 time. *Three hours lecture.*

ESL 079 3.0 Units Intermediate Sentence Structure: Spoken English

Prerequisite: Successful completion of 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. Repeatable 1 time. *Three hours lecture.*

ESL 087 3.0 Units Advance Sentence Structure: Written English

Prerequisite: Successful completion of ESL 078 or ESL 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 100 3.0 Units Health Professionals: Exploring Career Goals in Health Care

Prerequisite(s): Eligibility for placement in ESL 077,078,079. Course Advisory: SCC minimum English and Math Standards. Designed for health care professionals with low-intermediate English language proficiency. Integrated language skills on themes such as career options and requirements in health care, job resumes and interviews in health care, and phone and email communication in health care settings. Repeatability: Not Repeatable. *Three hours lecture.*

ESL 101 3.0 Units Health Professionals: Communicating with Patients and Families

Prerequisite(s): Eligibility for placement in Level II ESL courses which are ESL 077, ESL 078, and ESL 079. Designed for health care professionals with low-intermediate English language proficiency. Integrated language skills on themes such as discussion of treatment options with patients, patient-centered communication techniques, and strategies for communicating with special-needs patients. *Three lecture hours.*

English

ESL 330 .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. This is an open entry/open exit, pass/no pass only course. May be repeated to a maximum of 6 units, including initial enrollment. *One one-half to four one-half hours activities.*

ESL 372 3.0 Units
Fund 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 Comm

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 374 3.0 Units
ESL Basic Grammar A

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.*