2019-2020 Catalog Addendum

This catalog addendum reflects updates and corrections to the 2019-2020 catalog.
New and modified program and courses are effective Spring 2020.
The complete catalog covers Summer semester (June-July 2019);
Fall semester (August-September 2018); and Spring semester (January-May 2020).
Catalog Revised 11/2019

www.solano.edu

A public community college serving the Northern California communities
of Benicia, Dixon, Fairfield, Suisun, Travis Air Force Base,
Vacaville, Vallejo, and Winters

Solano Community College Fairfield Campus
4000 Suisun Valley Road, Fairfield, CA 94534-3197
(707) 864-7000

Vacaville Center
2001 North Village Parkway, Vacaville, CA 95688
(707) 863-7836

Vallejo Center
545 Columbus Parkway, Vallejo, CA 94591
(707) 642-8188

Travis Air Force Base Center
530 Hickam Ave., Bldg. 249, Travis Air Force Base, CA 94535
(707) 424-2431

Accreditation and Approvals

- Solano Community College is accredited by the Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges, 10 Commercial Blvd., Suite 204, Novato, California 94949, (415) 506-0234, an institutional accrediting body recognized by the Council for Higher Education Accreditation and the U.S. Department of Education. Additional information about accreditation, including the filing of complaints against member institutions, can be found at: www. accjc.org.

- The Nursing program is approved by the California State Board of Registered Nursing.

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

- The Aeronautics program is certified by the Federal Aviation Administration (FAA) in accordance with CFR14, FAR Part 147.

- Solano Community College is approved for veterans training by the U.S. Department of State and for Foreign Student Education by the U.S. Immigration Service (USCIS).

Admissions and Registration

GENERAL ENROLLMENT FEES AND OTHER COSTS

- Enrollment fee:
  - $46 per unit.
  - There is no enrollment fee for noncredit classes.
  - Fees are due and payable at registration.
  - Upper division courses (numbered 400-499 as part of the Biomanufacturing Baccalaureate Degree) require an additional $84 per unit which cannot be covered by the California College Promise Grant.
  - Enrollment fees are subject to change by the State Legislature.

- Non-resident tuition fees: (out-of-state and international students) $272.00 per unit and $10.00 per unit nonresidential capital outlay fee. Fees are subject to change.

- Parking permits are required for students parking their vehicles at the Fairfield campus, Vallejo and Vacaville Centers - $32 fee per vehicle.

- Student transcript fee: $4.00; Rush service $7.50; $1.00 unofficial transcript.

- Student on-campus enrollment verification fee: $1.00; Verification service through the National Student Clearinghouse: Visit *studentclearinghouse.org* for current fees.

- Health Center fee: Fall/Spring-$17.00; Summer-$8.00

- Student photo-ID card for on-campus students: $5.00 (good for nine consecutive semesters when validated).

- Student Center fee: $1 per unit, up to a maximum of $10 per academic year.

- Library fines: See website for fees.

- Parking citations: $32 plus fees (for regular parking citations); $275 plus fees (for handicapped parking citations).

- Instructional and required materials fees: See the Schedule of Classes.

*Fees Subject to change.

STUDENT PHOTO-IDENTIFICATION CARD FEE
A photo-identification card is recommended for all students, except students who enroll in fee-based courses offered by Community Services. Students should carry their card while on campus. The fee is payable at registration. Once purchased, students may have photo taken and an ID will be created on the spot at the Cashier's Window.

The card may be used during nine consecutive semesters of attendance. The card must be validated each semester upon presenting proof of registration. Students with a valid ID card are eligible for off-campus student discounts. There is no charge for the validation. Student ID cards may be obtained at the Cashier's Window, Bldg. 400 (first floor).

HEALTH CENTER FEES
Since the provision of health services is very expensive and the California Community College system does not have sufficient funds to subsidize student health services, the State Legislature mandates that the burden of supporting a student health center will be shared by all Solano Community College students through a general fee, regardless of whether they utilize the health center or have their own insurance.

The State of California has mandated this fee for credit courses through Section 72252 of the California State Education Code. The fee is not applicable to students who can demonstrate, at the time of enrollment, that they are recipients of benefits under the CalWORKS program, the Supplemental Security Income/State Supplementary program, or the General Assistance program. Fee waiver forms may be obtained from the Financial Aid office.

Refer to Financial Aid Programs & Eligibility CCPG/BOG fee Waiver (BOG FW) information.

STUDENT CENTER FEES
Education Code section 76375 authorizes districts to establish an annual building and operating fee, for the purpose of financing, constructing, enlarging, remodeling, refurbishing, and operating a student body center.

TRANSPORTATION FEES
0.5 – 3.0 Units = $1.50
3.5 – 6.0 Units = $4.00
6.5 – 11.5 Units = $8.00
12+ Units = $10.00

APPLYING FOR REFUNDS
Classes dropped by appropriate deadlines are automatically refunded. Any outstanding debts are deducted from refunds. Fees are refunded by check 2-4 weeks after classes are dropped.

California Community Colleges Enrollment And Non-Resident Tuition Fee
Fall and Spring Semesters – Full Term Classes
Through refund deadline, 100% of the California Community College Enrollment Fee will be refunded.

Summer Session and Short-Term Courses
Through 10% of the course, 100% of the California Community College Enrollment Fee will be refunded.

Advanced Manufacturing

Automation Technology

Program Description
The Automation Technology program provides an introduction to industrial automation including digital electronic, process control and programming of PLCs, robotics and SCADA systems. The program examines applications and examples of automated manufacturing systems including both the theory and function of digital and industrial electronics, hydraulics and pneumatics, robotics systems, digital programming languages and alarm management.

Certificate of Achievement and Associate in Science Degree
A Certificate of Achievement can be obtained upon completion of the 27-28-unit major. The Associate in Science Degree can be obtained by completing the 27-28-unit major, general education requirements and electives. All courses for the major must be completed with a minimum grade of C or a grade of P if the course is taken on a Pass/No Pass basis.

Program Outcomes
1. Describe and apply current safety rules and regulations while working on various manufacturing and automation systems.
2. Configure and program manufacturing systems and modules including Programmable Logic Controllers (PLCs), Human Machine Interfaces (HMIs), and industrial robots.
3. Demonstrate an understanding of electrical systems and devices related to manufacturing and automation systems.

REQUIRED COURSES.. **Units**
CIS 001 Introduction to Computer Science........................3
IT 151 Vocational Mathematics...3
IT 101 Introduction to Mechatronics 3
MT 162 Robotic Manufacturing Systems...........................3
MT 163 Advanced Robotics Manufacturing Systems 3
MT 164 Programmable Logic Controllers..........................3
MT 165 Advanced Programmable Logic Controllers 3
One course from Electronics List 3-4
Three units from Elective List 3
    Required Major Total Units **27-28**

Electronics List: (select one course) ....**Units**
MT 121 Electronics...4
MT 122 Principles of Digital Electronics...........................3

Elective List (select three units) .... **Units**
DRFT 151 3D Modeling with Fusion 360 .... 1.5
IT 174 Making Things 4 – Basic Electronics 1
MT 166 CNC Programming 3
MT 132 Principles of Fluid Power Systems...................... 3
MT 142 Principles of Electrical Machinery...................... 3
OCED 090 Occupational Work Experience.....................1-3
OCED 070 Occupational Soft Skills................................ 1.5

Solano General Education **21**
Electives (as needed to reach 60 units)..................... **11-12**
    Total Degree Units Solano GE.................................. **60**

Advanced Manufacturing

Maintenance Technician

Program Description
The Maintenance Technician certificate introduces the student to basic electrical and mechanical components used in basic manufacturing systems. Topics covered include functional descriptions, physical properties and operation of electrical and mechanical components and devices. Industrial components and preventative maintenance requirements are also investigated. Students receive hands-on practical experience in the use and application of basic electrical instruments and mechanical measuring devices. An emphasis is placed on safe work habits and procedures, systematic preventive maintenance, localization and correction of malfunctions, and troubleshooting techniques.

Certificate of Achievement
The Certificate of Achievement can be obtained by completing the 18-unit major. All courses for the major must be completed with a minimum grade of C or a grade of P if the course is taken on a Pass/No Pass basis.

Program Outcomes
1. Describe and apply current safety rules and regulations while working on various industrial equipment and machinery.
2. Understand the physical operation of electro-mechanical components such as AC and DC motors, solenoids, relays and various sensors used in basic manufacturing systems.
3. Describe and perform troubleshooting, preventative maintenance and documentation methods associated with basic manufacturing systems.

REQUIRED COURSES... **Units**
IT 101 Introduction to Mechatronics 3
IT 151 Vocational Mathematics 3
MT 130 Principles of Mechanical Power Systems 3
MT 132 Principles of Fluid Power Systems 3
MT 140 Principles of Industrial Electrical Systems 3
MT 142 Principles of Electrical Machinery 3
   Required Major Total Units **18**

Advanced Manufacturing

Mechatronics

Program Description

Mechatronics is the study of electronics, mechanics, electrical, and control systems to produce a well-rounded technician capable of handling the complex maintenance and operations tasks demanded by modern manufacturing, packaging, processing, transportation, and communication industries.

Individuals with well-rounded knowledge of how electromechanical and automated systems work together are in high demand and qualify to enter occupations such as a technician or specialist in industrial maintenance, automation, engineering, or in testing/research.

Certificate of Achievement and Associate in Science Degree

A Certificate of Achievement can be obtained upon completion of the 36-37-unit major. The Associate in Science Degree can be obtained by completing the 36-37-unit major, and general education requirements.

Program Outcomes

Students who complete the Mechatronics Certificate of Achievement/Associate Degree will be able to:

1. Demonstrate safe work habits around mechanical and electrical industrial equipment.
2. Troubleshoot and solve basic problems involving electrical wiring, connections, and distribution at both the component level.
3. Troubleshoot and solve basic problems involving mechanical and fluid power systems.
4. Demonstrate proficiency in relating and integrating math and science concepts with basic systems found in industry.
5. Demonstrate proficiency in integrating computer use with industrial machinery and control systems.

REQUIRED COURSES	Units
CIS 001 Introduction to Computer Science	3
IT 101 Introduction to Mechatronics	3
IT 151 Vocational Mathematics	3
MT 130 Principles of Mechanical Power Systems	3
MT 132 Principles of Fluid Power Systems	3
MT 140 Principles of Industrial Electrical Systems	3
MT 142 Principles of Electrical Machinery	3
MT 162 Robotic Manufacturing Systems	3
MT 164 Programmable Logic Controllers	3
One Course from Electronics List	3-4
6 units from Electives List	6
Required Major Total Units	**36-37**

Electronics List (select one course)	3-4
MT 120 Principles of Analog Electronics	3
MT 121 Electronics	4
MT 122 Principles of Digital Electronics	3

List A: (select 6 units)	Units
~~DRFT 045 Introduction to Computer-Aided Drafting (CAD)~~	~~4~~
DRFT 050 Basic Drafting	1.5
DRFT 079 Blueprint Reading	3
DRFT 151 3D Modeling with Fusion 360	1.5
IT 050 Alternative Energy Technologies	3
IT 120 Electrical Safety	3
IT 140 Industrial Materials	3
IT 174 Making Things 4 – Basic Electronics	1
MT 163 Advanced Robotics Manufacturing Systems	3
MT 165 Advanced Programmable Logic Controllers	3
MT 166 CNC Programming	3
OCED 070 Occupational Soft Skills	1.5
OCED 090 Occupational Work Experience	1-6

Solano General Education	**21**
Electives (as needed to reach 60 units)	**2-3**
Total Degree Units Solano GE	**60**

Advanced Manufacturing

Industrial Technology

IT 181 Introduction to Drones   **3.0 Units**
Course Advisory: SCC minimum English and Math standards.
Hours: 48-54 lecture.
An introduction to Drones and Unmanned Aerial Vehicles. Provides a starting point to use drones for multiple purposes and careers. Topics include the basics of aviation and flight, classes of drone systems, applications, required equipment, maintenance, mission planning, control systems, recovery systems and regulations. Intended for those looking to become licensed to use drones for commercial purposes such as aerial cinematography, photography, surveying, and imaging.

IT 182 Basic Drone Operations   **3.0 Units**
Prerequisite: IT 181 with a minimum grade of C.
Hours: 32-36 lecture, 48-54 lab.
Basic flight operation, drone controls, and equipment as well as safety procedures. Students will understand the varied uses of unmanned aviation vehicles (UAV) and learn the Federal Aviation Administration (FAA) guidelines for commercial usage.

IT 183 Drone Photography and Video   **3.0 Units**
Prerequisite: IT 182 with a minimum grade of C.
Hours: 32-36 lecture, 48-54 lab.
Covers the use of cameras and sensors to capture and analyze aerial photos and video. Camera and sensor mounting, settings, accessories, image analysis, options, software, and best practices will be explored.

IT 184 Remote Pilot Exam Prep   **1.5 Units**
Prerequisite: IT 182 with a minimum grade of C.
Hours: 24-27 lecture.
Covers the aeronautical knowledge required to fly drones for commercial purposes. Prepares the student to take the Federal Aviation Administration (FAA) Part 107 examination.

IT 175 Maker Space Technology Lab   **3.0 Units**
Prerequisite: IT 171, IT 172, IT 173, and IT 174 with a minimum grade of C..
Hours: 16-18 lecture, 96-108 lab.
The full range use of Maker Space equipment to create and design projects in the Maker Space laboratory. An emphasis will be given to multiple tooled projects (3D printing and electronics or laser cutting and woodworking, for example). Students will create designs using instructor-given parameters, plan projects and analyze results.

American Sign Language

ASL 055 3.0 Units
Interpreting 1: Consecutive Interpreting
Prerequisite: ASL 053 with a minimum grade of C.
Transferable to CSU
Hours: 48-54 lecture.

Building and improving basic receptive and expressive sign language interpretation skills emphasizing the development of consecutive ASL to English and English to ASL.

ASL 056 3.0 Units
Interpreting 2: Simultaneous Interpreting
Prerequisite: ASL 053 with a minimum grade of C.
Transferable to CSU
Hours: 48-54 lecture.

Advanced simultaneous interpreting skills that can be applied in both ASL to English and English to ASL interpretation. Topics include: research and analysis of the simultaneous interpreting process, interpreting models and how to apply them in various work environments, and the basis of ethical decision making within the field of sign language interpreting.

Automotive

ATEC 150   **2.0 Units**
Automotive Data Acquisition
Course Advisory: SCC minimum English and Math Standards.
Hours: 32-36 lecture.

Provides an understanding of OASIS (Online Automotive Service Information Systems) and the skills needed to adequately retrieve and apply automotive data, service procedures, and technical service bulletins. Includes the preparation of computer based repair orders and calculating repair estimates using web based service information providers.

ATEC 151   **3.0 Units**
Automotive Parts and Service
Hours: 32-36 lecture. 48-54 lab.

An introduction to the skills and knowledge utilized in the field of automotive parts and service consulting. This course offers preparation for the Automotive Service Excellence (ASE) C-1 and P-1 exam and certification. Topics include flow chart/diagnostic chart interpretation, parts removal/replacement, small group communication, and small business operations related to the automotive industry.

Biology

BIO 005   Human Physiology   5.0 Units
Prerequisite: A minimum grade of C in BIO 004 and CHEM 001, CHEM 010 or CHEM 012 (formerly CHEM 051).
General Education: Option A: Area A; Option B: Area 5B, Area 5C; Option C: Area B2, Area B3
Transferable to UC/CSU
Hours: 48-54 lecture, 96-108 lab.

A description of physiological and homeostatic mechanisms of the body systems in health and disease. The laboratory relates structure to function, uses instrumentation to measure physiological variables, and enables students to critically evaluate functional status.
(C-ID BIOL 120B)

Biology

Biomedical Sciences

Program Description
The Biomedical Sciences Associate in Science Degree prepares students to transfer into a health care profession program offered at a community college or a four year institution. These fields include nursing, respiratory therapy, radiological science, physical therapy, occupational health, dental assistant, and dental hygiene. The degree provides basic knowledge in chemistry, microbiology, human anatomy, and human physiology. These are the common prerequisites for community college and university allied health majors.

Certificate of Achievement and Associate in Science Degree
A Certificate of Achievement can be obtained upon completion of the 18-19-unit major. The Associate in Science Degree can be obtained by completing the 18-19-unit major, general education requirements and electives. All courses for the major must be completed with a minimum grade of C or a grade of P if the course is taken on a Pass/No Pass basis.

Program Outcomes
1. Demonstrate knowledge of the structure and function of the major organ systems of the human body.
2. Demonstrate knowledge of the normal physiological functions of the organ systems and explain how disturbances of normal physiological functions lead to metabolic and physiological disorders (clinical applications).
3. Demonstrate knowledge of how microorganisms interact with the human body and describe how these interactions lead to health or human disease

REQUIRED COURSES.. **Units**
BIO 004 Human Anatomy 5
BIO 005 Human Physiology 5
BIO 014 Principles of Microbiology 4
One course from Chemistry List.....................................4-5
   Required Major Total Units **18-19**

Chemistry List: (select one course) ....**Units**
CHEM 001 General Chemistry I 5
CHEM 010 Intermediate Chemistry 4
CHEM 012 Chemistry for the Health Sciences..................5

CSU General Education or IGETC Pattern units.... **37-39**
Electives (as needed to reach 60 units)........................**9-12**
   Total Degree Units CSU GE or IGETC **60**

Solano General Education **21**
Electives (as needed to reach 60 units)...................... **20-21**
   Total Degree Units Solano GE.................................. **60**

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

Biotechnology

Stem Cells and Cell-Based Technologies

Program Description
This program trains students to enter the emerging fields of commercial stem cell production and other cell production technologies, such as CAR-T, cancer therapies, and other cell-based therapies.

Certificate of Achievement
The Stem Cells and Cell-Based Technologies Certificate of Achievement can be obtained by completing the 24-29-unit major. All courses for the major must be completed with a minimum grade of C or a grade of P if the course is taken on a Pass/No Pass basis.

Program Outcomes
1. Apply knowledge of cell biology concepts to prepare and maintain cells in culture while maintaining sterility – stem cells must be able to be cultured in an undifferentiated state or induced to differentiate into different cell types.
2. Apply knowledge of the regulation of the Food and Drug Administration and other international regulatory agencies of cell-based therapeutic agents.
3. Follow the appropriate procedures to maintain controlled documents: In a research setting, students will keep a research laboratory notebook using a standard legal format. In a manufacturing setting, students will keep the appropriate controlled documents (batch production records) required to comply with current Good Manufacturing Practice.

REQUIRED COURSES... **Units**
BIOT 001 Principles of Biotechnology 3
BIOT 052 Business and Regulatory Practices in
    Biotechnology..3
BIOT 057 Synthetic Biology and Algae Biotechnology 3
BIOT 060 Mammalian Cell Culture 3
BIOT 061 Stem Cells and Cell-Based Technologies 3
One course from Biomanufacturing List 1-4
One course from Biology List...4-5
One course from the Chemistry List 4-5
    Required Major Total Units **24-29**

Biomanufacturing List: .... **Units**
BIOT 062 Cell Culture and Protein Recovery....................4
BIOT 065 Biomanufacturing Fundamentals 1

Biology
BIO 002 Cell and Molecular Biology 5
BIO 014 Principles of Microbiology 4

Chemistry
CHEM 001 General Chemistry 5
CHEM 010 Intermediate Chemistry 4
CHEM 012 Chemistry for the Health Sciences 5

Biotechnology

BIOT 060 Mammalian Cell Culture   **3.0 Units**

Prerequisite: BIO 002 or BIO 014 with a minimum grade of C.
Transferable to CSU
Hours: 16-18 lecture, 96-108 lab

Lab-intensive course on mammalian cell culture techniques that include working under aseptic conditions, sterile techniques in a biosafety cabinet (laminar flow hood), media preparation, quantification and passage of cells, and cryopreservation of cell lines. Laboratory experience prepares students for work in industry. Students may be required to perform laboratory tasks outside of class hours to care for cells

BIOT 061   **3.0 Units**
Stem Cells and Cell Based Technologies

Prerequisite: BIO 002 or BIO 014 with a minimum grade of C.
Transferable to CSU
Hours: 16-18 lecture, 96-108 lab

The principles of stem cell biology. Topics include embryonic stem cells in early development, adult stem cells, induced pluripotent stem cells, and the ethical issues involved in stem cell research. Emphasis on laboratory techniques including culture of stem cells and organoids and directed differentiation of mouse embryonic stem cells. The laboratory emphasizes analysis of stem cells by immunofluorescence and flow cytometry..

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 the 26-30-unit major, general education requirements, and electives. All courses in the major must be completed with a minimum grade of C or a P if the course is taken on a Pass/ No Pass basis.

Program Outcomes
Students who complete the Chemistry Associate Degree will be able to:
1. Demonstrate skills for various lab techniques.
2. Formulate and write names applying International Union of Pure and Applied Chemistry rules for chemical compounds.
3. Interpret and analyze chemical data.
4. Identify and write different types of chemical reactions.

REQUIRED COURSES..**Units**
CHEM 001 General Chemistry I... 5
CHEM 002 General Chemistry II....................................... 5
CHEM 003 Organic Chemistry I.. 5
CHEM 004 Organic Chemistry II 5
BIO (any course except 048 or 098) 3-5
One course from List A..3-5
   Required Major Total Units.................................. **26–30**

List A: (select one course) .... **Units**
PHYS 002 General Physics (Non-calculus) 5
PHYS 006 Physics for Science and Engineering 5
PHYS 010 Descriptive Physics 3

CSU General Education or IGETC Pattern units....37-39
Transferable Electives (as needed to reach 60 units) .. 0-3
   Total Degree Units CSU GE or IGETC 60-62

Solano General Education 21
Electives (as needed to reach 60 units)........................9-13
   Total Degree Units Solano GE.................................... 60

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

CHEM 001   General Chemistry I   5.0 Units
Prerequisite: CHEM 160 with a minimum grade of C (recommended for students with no previous chemistry) or CHEM 010 with a minimum grade of C (recommended for students who have had an introductory level chemistry course) or a score of 3, 4, or 5 on the Chemistry AP exam; and MATH 104 with a minimum grade of C or eligibility for MATH 002 by ~~a counselor or math instructor based on~~ a Multiple Measures Evaluation.
General Education: Option A: Area A; Option B: Area 5A, Area 5C; Option C: Area B1, Area B3
Transferable to UC/CSU
Hours: 48-54 lecture, 96-108 lab.
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. This course requires significant math skills and previous knowledge of fundamental chemistry concepts. Field trips and online work may be required. (CHEM 001 = C-ID CHEM 110)
(CHEM 001 + CHEM 002 = C-ID CHEM 120S)

CHEM 002   General Chemistry II   5.0 Units
Prerequisite: CHEM 001 with a minimum grade of C.
General Education: Option A: Area A; Option B: Area 5A, Area 5C; Option C: Area B1, Area B3
Transferable to UC/CSU
Hours: 48-54 lecture, 96-108 lab.
A continuation of chemical principles and theory covered in CHEM 001 with emphasis on electrochemistry, chemical equilibrium, acid-base equilibrium, thermodynamics, descriptive chemistry and quantitative and qualitative analysis. This course requires significant math skills and previous knowledge of fundamental chemistry concepts. Field trips and online work may be required.
(CHEM 001 + CHEM 002 = C-ID CHEM 120S)

Chemistry

CHEM 010 Intermediate Chemistry   4.0 Units

Prerequisite: Recommendation of MATH 104 based on a Multiple Measures Evaluation.
Course Advisory: CHEM 160 strongly recommended for students who have never taken Chemistry before.
General Education: Option A: Area A; Option B: Area 5A, Area 5C; Option C: Area B1, Area B3
Transferable to UC/CSU
Hours: 48-54 lecture, 48-54 lab.

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. *(C-ID CHEM 101)*

CHEM 012 Chemistry for the Health Sciences   5.0 Units

Course Advisory: CHEM 160 strongly recommended for students who have never taken Chemistry before; recommendation of MATH 104 based on a Multiple Measures Evaluation; Eligibility for ENGL 001.
General Education: Option A: Area A; Option B: Area 5A; Option C: Area B1
Transferable to UC/CSU
Hours: 48-54 lecture, 96-108 lab.

An overview of general, organic chemistry, and biochemistry for majors in nursing and other allied health occupations. Topics covered include chemical bonding, chemical equations, gas laws, solutions, acid-base theory, oxidation-reduction, functional groups and properties of organic compounds, and the structure and function of carbohydrates, lipids, proteins, and nucleic acids. These topics are discussed in the context of cellular metabolism and human health. This course is not a prerequiste for any chemistry course. Field trip may be required. Online homework may be required. NOTE: Not open for credit to students who have completed CHEM 011. Formerly CHEM 051.

CHEM 020   Elements of Chemistry   3.0 Units

Prerequisite: MATH 330 with a minimum grade of C or recommendation based on a Multiple Measures Evaluation.
Transferable to UC/CSU
Hours: 48-54 lecture.

Develops scientific literacy for non-science majors. When combined with the lab (CHEM 020L), the course will meet the General Education requirement for physical science with lab. The course is a survey of the fundamental concepts and contemporary applications of chemistry. Students will explore the real world applications of chemistry in the home, the environment, nutrition, health, fitness and medicine.

Child Development and Family Studies

CDFS 052   Children with Special Needs   3.0 Units
Course Advisory: CDFS 038
Transferable to CSU
Hours: 48-54 lecture
An introductory study of children with special needs, including causes of disabilities, their incidence, care, management, and general remedial procedures. Emphasis is on the child with disabilities in the home and community settings.

CDFS 063 Introduction to Curriculum   3.0 Units
Prerequisite: CDFS 038 with a minimum grade of C
Course Advisory: CDFS 062 with a minimum grade of C. Transferable to CSU
Hours: 48-54 lecture
An overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age 6. Students will examine a teacher's role in supporting development and fostering children's curiosity and learning. Through observation and assessment strategies students will develop appropriate play-based curriculum. An overview of content areas will include but not be limited to: Language and literacy, social and emotional learning, sensory learning, art and creativity, music, math, and science. Field trip may be required. *(C-ID ECE 130)*

Computer Information Science

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

Program Description
Successful completion of this major will assure competence in computer science through programming and basic data structures, providing an adequate background for employment in many computer system and technology areas as well as providing a firm foundation for students planning to pursue a baccalaureate degree in Computer Science and related disciplines.

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

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

Program Outcomes
Students who complete the Associate in Science in Computer Science for Transfer degree will be able to:
1. Analyze, document and construct a solution to a problem by applying appropriate computer science concepts and ideas.
2. Effectively communicate solution(s).
3. Demonstrate their ability to program in at least one programming language.

REQUIRED COURSES .... **Units**
CIS 020 Assembly Programming 3
CIS 021 Discrete Structures for Computer Science 3
CIS 022 Introduction to Programming 3
CIS 023 Data Structures and Algorithms 3
MATH 020 Analytic Geometry and Calculus I 5
MATH 021 Analytic Geometry and Calculus II................5
PHYS 006 Physics for Science and Engineering................5
One Biology course 5
    Required Major Total Units 18-19

Biology: (select one course)... **Units**
BIO 002 Cell and Molecular Biology 5
BIO 003 Evolution, Ecology & Biodiversity.......................5

CSU General Education or IGETC Pattern Units ... 37-39
CSU Transferable Electives (as needed to reach 60 transferable units)*.. 1
    Total Degree Units.. 60

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

Computer Information Science

Computer Applications Specialist Job-Direct Low Unit Certificate

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

REQUIRED COURSES
....**Units**
BUS 097 Work Readiness...1.5
CIS 066 Microsoft Word 3
CIS 073 Microsoft Excel 3
CIS 078 Access - Database Management System............3
Total Units..10.5

Motion Graphic Editor Job-Direct Low Unit Certificate

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

REQUIRED COURSES ....**Units**
CIS 062 Creating Web Interactivity 3
CIS 069 Multimedia for the Web...3
CIS 087 Adobe Illustrator for the Web 3
    Total Units 9

Digital and Print Publishing Job-Direct Low Unit Certificate

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

REQUIRED COURSES
....**Units**
CIS 070 Adobe Photoshop for the Web 3
CIS 085 Digital Publishing with InDesign 3
CIS 087 Adobe Illustrator for the Web 3
BUS 097 Work Readiness 1.5
Total Units..10.5

COUN 062   **3.0 Units**

Helping Skills: Creating Alliances & Facilitating Change

Course Advisory: COUN 083; Eligibility for ENGL 001; and SCC minimum English standard.

Transferable to CSU

Hours: 48-54 lecture.

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.

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

Program Outcomes
Students who complete the Criminal Justice, Corrections Certificate of Achievement/Associate Degree will be able to:
1. Demonstrate an understanding of the American Criminal Justice system and the scope of responsibilities of the various local, state, and federal law enforcement agencies beginning with arrest through parole.
2. Articulate the system's objectives, the crime problem, and role expectations of criminal justice personnel, and describe the various agencies and each subsystem within the system.
3. Describe the system's responsibilities to the community, factors in crime causation, the social implications of crime and communication barriers between the system and the community.

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
6 units from List A 6
   Required Major Total Units 30

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

CSU General Education or IGETC Pattern units.... 37-39

Total Degree Units CSU GE or IGETC 64-66

Solano General Education 21

Electives (as needed to reach 60 units)........................... 9

   Total Degree Units Solano GE.................................. 60

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

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

Criminal Justice

Criminal Justice, Law Enforcement

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

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

Program Outcomes
Students who complete the Criminal Justice, Law Enforcement Certificate of Achievement/Associate Degree will be able to:
1. Demonstrate an understanding of the responsibilities of law enforcement, courts, and corrections, and their applicability to adults and juveniles.
2. Articulate the roles of the criminal and civil court systems.
3. Identify and describe the three proximate cause theories of attributed liability

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
6 units from List A 6
    Required Major Total Units 30

List A: (select 6 units) .... **Units**
CJ 056 Juvenile Procedures.. 3
CJ 057 Criminal Justice Career Development 3
CJ 064 Principles and Procedures of
    the Criminal Justice System 3
~~CJ 090 Vocational Work Experience~~
    ~~Law Enforcement.. 1-3~~

CSU General Education or IGETC Pattern units 37-39
Total Degree Units CSU GE or IGETC 64-66

Solano General Education 21
Electives (as needed to reach 60 units)............................. 9
    Total Degree Units Solano GE.................................... 60

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

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

Dance

Program Description

This program is designed for students planning to transfer to a four-year university to major or minor in dance. A comprehensive dance education will develop skills required to create, perform, communicate and grasp the essence of dance. These skills are acquired through the study of modern dance, ballet technique, jazz technique, hip-hop technique, ballroom technique, performance, as well as dance production, dance appreciation, choreography composition and music fundamentals.

Associate of Arts Degree

The Associate of Arts Degree can be obtained upon completion of 60 units, including the courses in the major for Dance and 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 Dance Associate Degree will be able to:
1. Demonstrate the skills required to perform at a proficient level in a variety of dance styles including ballet, jazz, hip-hip and modern dance.
2. Demonstrate an understanding and appreciation for the principal historical, theoretical, and critical approaches to dance as a performing art.
3. Demonstrate a working knowledge of production techniques, including backstage, and show management.

REQUIRED COURSES .... **Units**
DANC 004 Dance Appreciation..3
DANC 004E Dance Production...3
DANC 004G Dance Choreography 2
1 course from Music..3
5 courses from Beginning Dance.......................................5
3 courses from Intermediate Dance 3
Required Major Total Units...19

Music (select one course)**...Units**
MUSC 008 Music Appreciation...3
MUSC 013 Multicultural Music in America 3

Beginning Dance (select five courses)**.......................Units**
DANC 004A Beginning Contemporary Modern Dance ..1
DANC 004F Beginning Hip-Hop Dance............................1
DANC 004H Beginning Jazz Dance 1
DANC 004J Beginning Ballroom Dance.............................1
DANC 004K Beginning Ballet 1
DANC 004N Beginning Swing Dance................................1
KINE 006E Fundamentals of Yoga 1

Intermediate Dance (select three courses) **................Units**
DANC 004M Intermediate Ballet.. 1
DANC 004P Intermediate Jazz Dance 1
DANC 004S Intermediate Swing Dance 1
DANC 004T Intermediate Ballroom Dance 1
KINE 006F Intermediate Yoga.. 1

CSU General Education or IGETC Pattern Units... 37-39
Transferable Electives
(as needed to reach 60 units) 11-13
Total Degree Units CSU GE or IGETC 60

Solano General Education...21
Electives (as needed to reach 60 units...........................16
Total Degree Units Solano GE...60

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

See Kinesiology section for DANC course descriptions

Drafting

Computer Aided Drafting (CAD) Technician Job-Direct Low Unit Certificate

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

REQUIRED COURSES ....**Units**
DRFT 045 Introduction to
    Computer-Aided Drafting (CAD) 4
DRFT 079 Blueprint Reading...3
DRFT 140 Surveying..3
One course from List A 3
One course from List B...3
   Total Units **16**

List A: (select one course) ....**Units**
DRFT 058 Solid Modeling with Solidworks 3
DRFT 161 Introduction to
    REVIT Architecture Software 3

List B: (select one course)...**Units**
DRFT 055 Mechanical Drafting - Level I............................3
DRFT 060 Architectural Drafting I.....................................3
DRFT 075 Electronic Drafting...3
DRFT 080 Civil Drafting I 3

Education

Associate in Arts in Elementary Teacher Education for Transfer (ADT: A.A.-T)

Program Description
The Elementary Teacher Education degree provides a strong liberal studies foundation for students seeking to teach in an elementary school. The coursework is designed to meet the introductory content area subject matter requirements for teaching at the elementary school level.

Associate in Arts Degree for Transfer
The Associate in Arts in Elementary Teacher Education for Transfer (AA-T) degree is designed specifically for transfer, providing the breadth and depth of coursework necessary for students who seek to study liberal arts and education coursework at the CSU in preparation for a career in elementary school teaching. Students completing this degree (AA-T in Elementary Teacher Education) are guaranteed admission to the CSU system, but not to a particular campus or major. Students transferring to a CSU campus that accepts the AA-T in Elementary Teacher Education will be required to complete no more than 60 units after transfer to earn a bachelor's degree. Students should consult with a counselor for more information on university admission and transfer requirements.

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

Program Outcomes
Students who complete the Associate in Arts in Elementary Teacher Education for Transfer Degree will be able to:
1. Apply an understanding of child development theories and ethical standards to the development of a personal teaching philosophy.
2. Apply an understanding of how diverse cultural beliefs and social, political, and/or historical context impact form of human expression
3. Demonstrate quantitative reasoning skills and an understanding of the scientific method, consistent with elementary level standards.
4. Critically evaluate strategies and techniques for working with culturally, linguistically and ethnically diverse populations, including children with special education needs.

EDUCATION REQUIRED CORE............................ **Units**
CDFS 038 Child Growth and Development........................3
EDUC 001 Elementary Teacher Education.........................2
OCED 090 Occupational Work Experience........................1

LIBERAL ARTS AND SOCIAL SCIENCE REQUIRED CORE
COMM 001 Introduction to Public Speaking....................3
ENGL 001 College Composition...4
ENGL 002 Critical Thinking and Writing About
   Literature 4
GEOG 004 World Geography 3
HIST 002 World History to 1500.......................................3
HIST 017 History of the United States to 1877..................3
PLSC 001 Introduction to American Government and
   Politics 3
ENGL 004 Critical Thinking and Composition: Language
   in Context...4

SCIENCE AND MATH REQUIRED CORE
BIO 015 Introduction to Biology 4
GEOL 006 Earth Science 3
GEOL 006L Earth Science Laboratory 1
MATH 055 Mathematical Concepts for Elementary School
   Teachers – Number Systems 3
PHSC 012 Introduction to Principles of
   Physical Science 4

List A: (select one course)
ART 010 Art Appreciation.. 3
MUSC 008 Music Appreciation 3
THEA 006 Introduction to Theatre.................................... 3

List B: (select two courses)
CDFS 062 Introduction to Early Childhood Education:
   Principles and Practices 3
CDFS 053 Teaching in a Diverse Society........................... 3
CDFS 064 Observation and Assessment 3

Required Major Total Units 56-59
CSU General Education or IGETC Pattern units 37-39
CSU Transferable Electives
(as needed to reach 60 transferable units)* 0-4
Total Degree Units 60

* 37-39 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.

Engineering

Engineering

Program Description
Solano Community College offers a two-year lower division Engineering Program that is designed to prepare students to transfer to a four-year university. The lower division Engineering Core Courses recommended by the Engineering Liaison Committee of the State of California have been coordinated between community colleges and the four-year colleges and universities throughout California. As part of our Engineering Program, an Associate in Science Degree in Engineering is available. Although most engineering students transfer to a four-year university, those with an AS degree can also be employed in entry-level jobs that require two years of college-level science and math.

Associate in Science Degree
The Associate in Science Degree in Engineering can be obtained by completing the 43-46-unit major and general education requirements. All courses for the major must be completed with a minimum grade of C or a grade of P if the course is taken on a Pass/No Pass basis.

Program Outcomes
1. Demonstrate analytical problem solving skills in Engineering.
2. Conduct experiments and critically assess the data.
3. Write professional laboratory reports and/or give oral presentations related to engineering principles.

REQUIRED COURSES... **Units**
CHEM 001 General Chemistry I 5
MATH 020 Analytic Geometry and Calculus I 5
MATH 021 Analytic Geometry and Calculus II 5
MATH 022 Analytic Geometry and Calculus III..............4
MATH 023 Differential Equations 4
PHYS 006 Physics for Science and Engineering...............5
PHYS 007 Physics for Science and Engineering...............5
Three courses from List A 10-13
    Required Major Total Units **43-46**

List A: (select three courses)...................................... **Units**
CIS 022 Introduction to Programming..............................3
ENGR 017 Introduction to Electrical Engineering...........5
ENGR 030 Engineering Mechanics: Statics.......................4
ENGR 045 Properties of Materials 4

DRFT 045 Introduction to Computer-Aided
    Drafting (CAD)..4
or
DRFT 058 Solid Modeling with Solidworks......................3

ENGR 026 Mathematics and Engineering Problem
    Solving Using Matlab 4
or
MATH 026 Mathematics and Engineering Problem
    Solving Using Matlab 4

CSU General Education or IGETC Pattern units....**37-39**
    Total Degree Units CSU GE or IGETC **68-75**

Solano General Education **21**
Electives (as needed to reach 60 units)............................ **0**
    Total Degree Units Solano GE...............................**64-67**

* 10-12 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.

Engineering

ENGR 001   Introduction to Engineering   2.0 Units
Course Advisory: Successful completion of ENGL 001; SCC minimum

   Math standard.

Transferable to UC/CSU
Hours: 32-36 lecture.

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. Develops communication skills pertinent to the engineering profession. Possible field trips.

ENGR 003   Introduction to Ethics in Engineering 3.0 Unit
Course Advisory: SCC minimum English standard.

Transferable to UC/CSU

Hours: 48-54 lecture.

Development of techniques of moral analysis and their application to ethical problems encountered by engineers, such as professional employee rights and whistle blowing; environmental issues; ethical aspects of safety, risk and liability; conflicts of interest. Emphasis on developing the capacity for independent ethical analysis of real and hypothetical cases.

Foreign Languages

Foreign Languages, General

Program Description

This program introduces the fundamentals of language learning (listening, speaking, reading, writing, and culture) with emphasis on language production, grammar, syntax, vocabulary acquisition, and exposure to the culture. This program provides study in more than one language.

Associate in Arts Degree

The Associate in Arts Degree can be obtained by completing a minimum of 20 units from major in the two different languages, general education requirements, and electives. All courses in the major must be completed with a minimum grade of C or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes

Students who complete the Foreign Languages, General Associate Degree will be able to:

1. Converse in an intermediate level in two or more languages: American Sign Language (ASL), French, or Spanish
2. Demonstrate grammatical and semantic proficiency in paragraph or narrative mode (for ASL) at the intermediate-low level.
3. Understanding of cultural and community differences

REQUIRED COURSES

Select a minimum of 20 units combined from the ~~two~~ different languages.

American Sign Language ....**Units**

ASL 001 American Sign Language 1 3
ASL 002 American Sign Language 2 3
ASL 003 American Sign Language 3 3
ASL 004 American Sign Language 4 3
ASL 005 American Deaf Culture..3
ASL 006 Linguistics of American Sign Language..............3
ASL 052 Fingerspelling, Classifiers, and Numbers 3
ASL 053 Introduction to American Sign Language
Interpreting 3

ASL 054 ASL Interpreting Field Work 2
and
OCED 090 Occupational Work Experience 1

French ....**Units**

FREN 001 First Semester French 5
or
FREN 031 First Semester French, Part 1 3
and
FREN 032 First Semester French, Part 2 3

FREN 002 Second Semester French 5
FREN 003 Third Semester French......................................5
FREN 004 Fourth Semester French 5
FREN 011 Conversational French 3
FREN 012 Intermediate French Conversation...................3

FLNG 101 Cross Age Teaching 2
and
OCED 090 Occupational Work Experience 1

Spanish.. **Units**

SPAN 001 First Semester Spanish......................................5
or
SPAN 031 First Semester Spanish, Part 1 3
and
SPAN 032 First Semester Spanish, Part 2 3

SPAN 002 Second Semester Spanish..................................5
or
SPAN 033 Second Semester Spanish, Part 1......................3
and
SPAN 034 Second Semester Spanish, Part 2......................3

SPAN 003 Third Semester Spanish....................................5
SPAN 004 Fourth Semester Spanish..................................5
SPAN 011 Conversational Spanish 3
~~SPAN 012 Intermediate Spanish Conversation ....3~~

FLNG 101 Cross Age Teaching...2
and
OCED 090 Occupational Work Experience........................ 1
    Required Major Total Units.. 20

 CSU General Education or IGETC Pattern units... 37-39
Transferable Electives (as needed to reach 60 units) .. 7-9
    Total Degree Units CSU GE or IGETC 60

Solano General Education 21
Electives (as needed to reach 60 units)........................... 19
    Total Degree Units Solano GE.................................. 60

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

Foreign Languages

Foreign Languages, Individual

Program Description
This program introduces the fundamentals of language learning (listening, speaking, reading, writing, and culture) with emphasis on language production, grammar, syntax, vocabulary acquisition, and exposure to the culture. This program requires study be accomplished in one language only.

Associate in Arts Degree
The Associate in Arts Degree in American Sign Language, French, or Spanish can be obtained by completing a minimum of 18 units in the corresponding languages general education requirements, and electives. All courses in the major must be completed with a minimum grade of C or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Foreign Languages, Individual Associate Degree will be able to:
1. Converse at an intermediate-mid level in one language: American Sign-Language (ASL), French, or Spanish
2. Demonstrate grammatical and semantic proficiency in paragraph or narrative mode (for ASL) at the intermediate-mid level in one language: American Sign Language (ASL), French, or Spanish
3. Demonstrate understanding of cultural and community differences

REQUIRED COURSES

Foreign Language, American Sign Language
(select 18 units)... **Units**
ASL 001 American Sign Language 1 3
ASL 002 American Sign Language 2 3
ASL 003 American Sign Language 3 3
ASL 004 American Sign Language 4 3
ASL 005 American Deaf Culture...3
ASL 006 Linguistics of American Sign Language.............3
ASL 052 Fingerspelling, Classifiers, and Numbers 3
ASL 053 Introduction to American Sign Language
Interpreting 3

ASL 054 ASL Interpreting Field Work 2
and
OCED 090 Occupational Work Experience 1

Foreign Language, French (select 18 units).............. **Units**
FREN 001 First Semester French...5
or
FREN 031 First Semester French, Part 1.............................3
and
FREN 032 First Semester French, Part 2.............................3

FREN 002 Second Semester French 5
FREN 003 Third Semester French 5
FREN 004 Fourth Semester French....................................5
FREN 011 Conversational French 3
FREN 012 Intermediate French Conversation...................3
~~FREN 031 First Semester French, Part 1~~ 3
~~FREN 032 First Semester French, Part 2~~ 3
FREN 049 French Honors...1

FLNG 101 Cross Age Teaching 2
And
OCED 090 Occupational Work Experience 1

Foreign Language, Spanish (select 18 units)............ **Units**
SPAN 001 First Semester Spanish.......................................5
or
SPAN 031 First Semester Spanish, Part 1 3
and
SPAN 032 First Semester Spanish, Part 2 3

SPAN 002 Second Semester Spanish..................................5
or
SPAN 033 Second Semester Spanish, Part 1......................3
and
SPAN 034 Second Semester Spanish, Part 2......................3

SPAN 003 Third Semester Spanish....................................5
SPAN 004 Fourth Semester Spanish..................................5
SPAN 011 Conversational Spanish 3
~~SPAN 012 Intermediate Spanish Conversation~~ 3
~~SPAN 025 Introduction to Latin American Culture: An~~
~~Exploration of Identity Through Essay,~~
~~Film, and Short Story~~ 3
~~SPAN 031 First Semester Spanish, Part 1~~ 3
~~SPAN 032 First Semester Spanish, Part 2~~ 3
~~SPAN 033 Second Semester Spanish, Part 1~~......................3
~~SPAN 034 Second Semester Spanish, Part 2~~......................3
SPAN 049 Spanish Honors ....1 - 3
~~SPAN 061M Beginning Spanish,~~
~~Part 1 for Medical Workers~~..3
~~SPAN 062M Beginning Spanish,~~
~~Part 2 for Medical Workers~~..3
~~SPAN 063M Beginning Spanish,~~
~~Part 3 for Medical Workers~~..3
~~SPAN 064M Beginning Spanish,~~
~~Part 4 for Medical Workers~~..3
~~SPAN 001S Spanish for Spanish Speakers 1~~......................5
~~SPAN 002S Spanish for Spanish Speakers 2~~......................5

Foreign Languages

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

HS 001   Introduction to Human Services   3.0 Units
Course Advisory: Eligibility for ENGL 001; SCC minimum Math standard.
General Education: Option C: Area D7
Transferable to UC/CSU
Hours: 48-54 lecture.
An overview of the history and purpose of human services. Students will familiarize themselves with skills needed to provide culturally responsive services to diverse consumer populations in areas such as social welfare, mental health, substance use, rehabilitation, and child, adult and elder care. Political and economic aspects inclusive of roles and functions of local human services agencies systems will be examined.

Interdisciplinary Studies

Science and Quantitative Reasoning

Program Description
This major is designed for students who are not certain of their specific academic major goals and do not have immediate transfer plans. It would enable them to earn the Associate Degree by completing general education and the 18-unit major. The program is intended to involve inquiry into the physical universe and its life forms with consideration of facts and principles which form the foundations of living and non-living systems. Students will explore scientific methodologies as investigative tools, the acquisition and use of evidence, and the past and present influences of science on world civilizations. Understanding and analysis of basic mathematical and quantitative reasoning concepts will be explored. This area includes courses in areas such as computer science, math, and science.

Associate in Arts Degree
The Associate in Arts Degree can be obtained by completing a minimum of 18-units in the major, Option A general education, and electives. All courses for this major must be completed with a minimum grade of C 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. Discern the relationship between personal perspective and evidence-based evaluation of information..
2. Discover the nature and common themes of the disciplines represented
3. Acquire a knowledge base that encourages lifelong learning in order for them to effectively adapt to a complex and changing society.

REQUIRED COURSES:
Minimum 6 units from Science
Minimum 6 units from Quantitative Reasoning
*Chemistry courses may not be used in both areas, must choose one area.
Required Major Total Units: Minimum of 18

SCIENCE
ANTH 001
ASTR 010, 020, 030, 040
BIO 002, 003, 004, 005, 012, 012L, 015, 016, 018, 019
CHEM* 001, 002, 003, 004, 010, 011, 051, 160
ENGR 017, 030, 045
GEOG 001, 001L
GEOL 001, 002, 005
HORT 050
KINE 020V, 020W
NUTR 010
PHYS 002, 004, 006, 007, 008, 010
PHSC 012
PSYC 002

Quantitative Reasoning
CIS 001, 015, 020, 022, 023, 035, 050, 055, 057, 060, 073, 078
CHEM* 001, 002, 010, 160
GEOG 010 or GEOL 010
MATH 002, 004, 011, 012, 020, 021, 022, 023, 030, 031, 040, 051, 102, 103, 104, 112, 114
PSYC 004

Solano General Education..**21**
Electives (as needed to reach 60 units) **21**
   Total Degree Units Solano GE..................................**60**

Kinesiology

Athletics

ATHL 012   **3.0 Units**
Women's Intercollegiate Beach Volleyball
Prerequisite: Permission of instructor required; for students with advanced beach volleyball skills, conditioning and previous competitive experience.
Course Advisory: SCC minimum English and Math standards.
Hours: 160-180 lab

A comprehensive course designed for the student athlete covering advanced intercollegiate beach volleyball skills. The course includes the theories and analysis of offensive and defensive strategies, skill acquisition, development of fitness skills and mental preparation for competition. Intercollegiate Women's Beach Volleyball competition conducted through NCAA and California Community College Athletic Association Rules.

Kinesiology

KINE 005R   **1.0 Unit**
Functional & Core Training
General Education: Option A: Physical Education; Option C: Area E Transferable to UC/CSU
Hours: 48-54 lab.

A focus on functional and core conditioning for students in physically demanding sports, fitness activities and professions. This course will help improve performance by utilizing the components of endurance, power, agility, strength, speed, stamina, flexibility, coordination, and balance.

Sports Medicine

SPMD 056A   **3.0 Units**
Sports Medicine-Athletic Training Practicum Fall Sports 2
Prerequisite: SPMD 055A with a minimum grade of C.
Hours: 24-27 lecture, 72-81 lab

Supervised volunteer athletic experience which provides students with the opportunity of immediate recognition of lower extremity injuries. Emphasis on advanced techniques in rehabilitation and recognition of moderate to severe injuries.

SPMD 056B   **3.0 Units**
Sports Medicine-Athletic Training Practicum Spring Sports 2
Prerequisite: SPMD 056A with a minimum grade of C.
Hours: 24-27 lecture, 72-81 lab

Supervised volunteer athletic experience which provides students with the opportunity for immediate recognition and treatment of moderate level upper extremity sports injuries. Emphasis is on taping techniques and rehabilitation which enables athletes to return to competition. Spring sport experience includes, softball, baseball, mens and womens swimming and diving. Injuries specific to these sports include most upper extremity injuries.

Mathematics

MATH 030   Business Calculus I   3.0 Units

Prerequisite: Math 104 with a minimum grade of C or Multiple Measures Evaluation
Course Advisory: SCC minimum English standard.
General Education: Option A: Area D3B; Option B: Area 2; Option C: Area B4
Transferable to UC/CSU Hours: 48-54 lecture, 16-18 lab.

A calculus course with emphasis placed on applications of calculus concepts to business and management related problems. The applications of derivatives and integrals of functions including polynomials, rational, exponential and logarithmic functions are studied. NOTE: Not open to students who have completed MATH 020 with a minimum grade of C.

MATH 031   Business Calculus II   3.0 Units

Prerequisite: MATH 030 with a minimum grade of C or recommendation of a counselor or math instructor based on a Multiple Measures Evaluation.
Course Advisory: SCC minimum English standard.
General Education: Option A: Area D2; Option B: Area 2; Option C: Area B4
Transferable to UC/CSU
Hours: 48-54 lecture.

A continuation of the calculus of functions of one variable (MATH 030). Topics included are the fundamental theorem of calculus, techniques of integration, numerical methods of integration, functions of several variables, elementary differential equations, and infinite series.

Music

MUSC 036B   Intermediate Voice II   **1.0** Unit
Prerequisite: MUSC
036A. Transferable to
UC/CSU
Hours: 16-18 lecture, 16-18 lab.

A continuation of MUSC 036A with emphasis on vocal technique and interpretation. Solo repertoire appropriate to intermediate level includes standard voice literature. Analysis of individual vocal problems and performance skills is included.

MUSC 042B   Jazz and Pop Piano   **1.0** Unit
Prerequisite: MUSC 027, MUSC 028, or equivalent as determined
*   by instructor.*
Course Advisory: MUSC 042A.
Transferable to UC/CSU
Hours: 16-18 lecture, 16-18 lab.

Instruction, practice, performance, and application of the techniques and principles of intermediate jazz and popular piano styles and skills. Emphasis will be directed to continuing the presentation made in 042A. Focus will be centered around arranging, improvisations, voicings, dialogue, hand formats, performance of literature, written projects and a further introduction to styles. The realization of lead sheets, sight reading, ear training, transcriptions of solos, fingerings, scale theory, exercises, and performance strategies will all be discussed.

Photography

PHOT 032 Digital Imaging   **3.0 Units**
Prerequisite: PHOT 029 with a minimum grade of C.
Course Advisory: Eligibility for ENGL 001; SCC minimum Math
   standard.
Transferable to UC/CSU
Hours: 32-36 lecture, 48-54 lab.

A comprehensive exploration of the management and development of digital photos, including the use of contemporary, industry standard software to catalog, optimize and transform images. Best practices, from capture to printing, will be covered and personal vision and creativity will be emphasized. SLR digital camera required. The department has some cameras for short term loan for students who have difficulty acquiring their own. (Formerly PHOT 071)

PHOT 158 Photo Illustration   **3.0 Units**
Prerequisite: PHOT 032 with a minimum grade of C and a minimum
   grade of C in either ART 045A or ART 046.
Hours: 32-36 lecture, 48-54 lab.

Builds on digital media skills in graphic design and photography. Students use original photos and advanced compositing layering and design to create a portfolio of illustrations suitable for editorial, commercial, or fine art applications. Student will need a Digital SLR camera and a portable external hard drive (minimum 500GB). The photo department has some equipment to loan students who are unable to provide their own.

Physical Science

Physical Science

Program Description
Solano Community College offers a two-year Associate in Science Degree in Physical Science that provides students the opportunity to investigate methods of scientific inquiry, and to gain scientific knowledge, through specialization in one or more Physical Science disciplines that align with their personal interests, such as Physics, Chemistry, Astronomy, and Geology. Crucially, students taking this degree will also gain an understanding of the factors that affect the Earth's climate, and will thereby develop a deep understanding of the important issue of Climate Change, which will allow them to be knowledgeable global citizens. Students will develop critical thinking skills, learn to communicate effectively in writing, and acquire an understanding of major scientific concepts. Through course options, students will employ methods of scientific inquiry to understand the world around them. Completion of the degree requirements will prepare students with the skills and resources needed to facilitate academic and career decisions.

Associate in Science Degree
An Associate in Science Degree can be obtained by completing the 34-unit major, general education requirements and electives. All courses for the major must be completed with a minimum grade of C or a grade of P if the course is taken on a Pass/No Pass basis.

Program Outcomes
1. Describe physical phenomena in multiple forms (verbal, pictorial, graphical, and mathematical).
2. Qualitatively and quantitatively predict, analyze and/or explain the behavior of physical systems using fundamental physical principles and models.
3. Develop and implement a plan of collecting and/or accessing experimental data, and performing data analysis

REQUIRED COURSES .... **Units**
CIS 001 Introduction to Computer Science........................3
MATH 011 Elementary Statistics 4
PHSC 013 Weather and Climate 3
PHSC 014 Atmospheric Science Laboratory 1
Option 1 or 2 10
13 Units from List A..13
  Required Major Total Units **34**

Option 1 ....**Units**
CHEM 001 General Chemistry I 5
CHEM 002 General Chemistry II 5

Option 2 ....**Units**
PHYS 002 General Physics (Non-calculus).......................5
PHYS 004 General Physics (Non-calculus).......................5

List A (select 13 units).. **Units**
Any course(s) not used from Option 1 or 2
ASTR 010 General Astronomy.. 3
ASTR 020 Astronomy Laboratory 1
ASTR 040 Stars, Galaxies, and Cosmology 3
ASTR 045 Introduction to Astrobiology
  and the Search for Life in the Universe......................... 3
ASTR 050 Astronomical Optics 1
CHEM 010 Intermediate Chemistry 4
GEOL 001 Physical Geology 3
GEOL 002 Geology Laboratory 1
GEOL 006 Earth Science 3
GEOL 006L Earth Science Laboratory 1
PHSC 012 Introduction to Principles of Physical Science 4
PHSC 015 Global Climate Change 3
PHSC 016 Natural Disasters... 3

Solano General Education **21**
Electives (as needed to reach 60 units)............................ 5
  Total Degree Units Solano GE.................................... 60

Political Science

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

Program Description
This program examines the theory and practice of government and the powerful personalities that affect governmental decisions. This interplay of individual citizens, public leaders, elections, and world events make political inquiry relevant today. The program provides a broad base for the analysis of how government resolves social conflict within the United States and around the world.

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

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

Program Outcomes
Students who complete the Associate in Arts in Political Science for Transfer degree will be able to:
1. Develop theory and content knowledge of political science
2. Comprehend, analyze, and evaluate academic literature in political science
3. Create original work and/or research in political science

REQUIRED COURSES .... **Units**
PLSC 001 Introduction to American Government
    and Politics 3
Three courses from List A.. 9-10
Two courses from List B 6
    Required Major Total Units **18-19**

List A: (select three courses)...................................... **Units**
PLSC 002 Introduction to Comparative Government...... 3
PLSC 003 Introduction to International Politics 3
PLSC 006 Basic Concepts in Political Thought 3
MATH 011 Elementary Statistics 4
PLSC 004 Introduction to Political Science...................... 3

List B: (select 6 units) ....**Units**
Any List A course not used 3-4
PLSC 005 Constitutional Rights in a Multicultural
    Society 3
PLSC 007 International Relations 3
PLSC 016 The American Legal System 3
PLSC 019 Human Rights and Sexual Orientation............ 3
PLSC 049 Political Science Honors 1-3
PLSC 050 Student Leadership 1

CSU General Education or IGETC Pattern Units ... 37-39
CSU Transferable Electives (as needed to reach 60
    transferable units)*..**8-17**
    Total Degree Units... **60**

* 6 - 12 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.

Political Science

PLSC 007 International Relations　　　　**3.0 Units**

Course Advisory: PLSC 001 with a minimum grade of C, Eligibility for
*　ENGL 001.*
Transferable to UC/CSU
Hours: 48-54 lecture.

An introduction to international relations theory with an examination of national, international, transnational, and sub-national actors and their institutions, interactions and processes as they relate to global issues. Designed to give students a foundation for the study of international relations, it provides a backdrop to understanding global interdependence, its causes and consequences. Included are political, economic, historical, philosophical, cultural, geographical, and environmental dimensions of interdependence. (Formerly IR 001)

Psychology

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

Program Description
The psychology program provides academic instruction in basic psychological concepts, theories, terminology, and research methods, and promotes life skills, personal growth, and interpersonal effectiveness.

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

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

Program Outcomes
Students who complete the Associate in Arts in Psychology for Transfer degree will be able to:
1. Demonstrate an understanding of the major theories in psychology.
2. Produce an APA formatted research proposal.
3. Demonstrate an ability to apply psychological concepts to everyday life.

REQUIRED COURSES.. **Units**
MATH 011 Elementary Statistics...4
PSYC 001 Introduction to Psychology................................3
PSYC 002 Biological Psychology..3
PSYC 004 Research Methods in Behavioral Science.........3
One course from List A 3-4
One course from List B...3

List A: (select one course) ....**Units**
BIO 015 Introduction to Biology 4
BIO 016 Introduction to Human Biology...........................3

List B: (select one course).. **Units**
PSYC 005 Abnormal Psychology.. 3
PSYC 006 Developmental Psychology............................... 3
PSYC 007 Cross-Cultural Psychology............................... 3
PSYC 012 Introduction to Gender...................................... 3
PSYC 020 Personal and Social Behavior........................... 3
PSYC 030 Introduction to Social Psychology................... 3
PSYC 034 Human Sexual Behavior 3
PSYC 040 Drugs, Society & Behavior................................ 3

Required Major Total Units......................................19-20
CSU General Education or IGETC Pattern Units ... 37-39
CSU Transferable Electives (as needed to reach 60 transferable units)*...10-19
   Total Degree Units... 60

* 9-15 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.

Psychology

Psychology

Program Description
The psychology program provides a broad overview of psychology as a science, in particular regard to major theories, methods, and applications. The program emphasizes critical thinking, skeptical inquiry and the scientific approach to understanding behavior and mental processes. In addition, personal, social, and organizational issues are explored using psychological principles.

Associate in Arts Degree
The Associate in Arts Degree can be obtained by completing the 22-unit major, general education requirements and electives. All courses for this major must be completed with a minimum grade of C or a P if the course is taken on a Pass/No Pass basis.

Program Outcomes
Students who complete the Psychology Associate Degree will be able to:
1. Demonstrate an understanding of the major theories in psychology.
2. Produce an APA formatted research proposal.
3. Demonstrate an ability to apply psychological concepts to everyday life.

REQUIRED COURSES .... **Units**
MATH 011 Elementary Statistics..4
PSYC 001 Introduction to Psychology...............................3
PSYC 002 Biological Psychology..3
PSYC 004 Research Methods in Behavioral Science.........3
Three courses from List A 9
    Required Major Total Units 22

List A: (select three courses) .... **Units**
PSYC 005 Abnormal Psychology 3
PSYC 006 Developmental Psychology 3
PSYC 007 Cross-Cultural Psychology 3
PSYC 012 Introduction to Gender.....................................3
PSYC 020 Personal and Social Behavior 3
PSYC 030 Introduction to Social Psychology 3
PSYC 034 Human Sexual Behavior....................................3
PSYC 040 Drugs, Society, & Behavior................................3
HS 001 Introduction to Human Services...........................3

CSU General Education or IGETC Pattern Units ... 37-39
CSU Transferable Electives (as needed to reach 60
    transferable units)*..8-10
    Total Degree Units.. 60

Solano General Education 21
Electives (as needed to reach 60 units)........................... 17
    Total Degree Units Solano GE.................................... 60

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

Psychology

PSYC 012 Introduction to Gender   **3.0 Units**

Course Advisory: PSYC 001, ENGL 001, LR 010, and SCC minimum Math standard.

General Education: Option A: Area B2; Option B: Area 4; Option C: Area D4.

Transferable to UC/CSU

Hours: 48-54 lecture.

An examination of the psychological, sociological, biological, cognitive, and cultural theories and research of sex and gender. Analysis of the effects of gender expectations and practices on individual development, health, relationships, and the workplace. Includes agents of socialization, impact of economic and political change, social construction of sexuality and gender identities, and intersectional aspects of gender, which includes race, ethnicity, and class. Open to all students.

Real Estate

RE 172 Real Estate Practice   **3.0 Units**
Course Advisory: SCC minimum English and Math Standards.
Hours: 48-54 Lecture.
A comprehensive study of the techniques used to successfully operate a real estate business. Includes office management administration, in-service training of associate licensees, legal and statutory compliance, and agency and other oversights. Designed for students needing a course for ~~continuing~~ education as required by the Department of Real Estate.

Social Justice/Ethnic Studies

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

Program Description

The Associate in Arts in Social Justice Studies for Transfer at Solano Community College prepares students to provide social leadership in creating greater equity and inclusion in the local community and in larger societal contexts. With a focus on Ethnic Studies, and Gender and Sexuality Studies, Social Justice Studies majors are given opportunities to critically examine the experiences of various communities in relation to issues of power and social inequality. The program's interdisciplinary coursework allows students exposure to a variety of theoretical frameworks including Psychology, English, Sociology, History, Art, Political Science, Communications and more, as well as the fundamentals of methodology needed for social inquiry. Critical thinking and problem solving are emphasized throughout the program, especially in the analysis of historical and current examples of social engagement and change. Social Justice Studies provides a strong academic preparation for upper division coursework, a range of career paths, and meaningful social awareness and public engagement over students' lifetimes.

Associate in Arts in Social Justice Studies for Transfer

The Associate in Art in Social Justice Studies for Transfer Degree is intended for seamless transfer to local California State University campuses (CSUs). Students who successfully complete degree requirements will be ensured preferential transfer status to local CSU campuses in degree programs identified as "similar to" Social Justice Studies by those CSU campuses. While coursework in Social Justice Studies is designed to provide lower division preparatory requirements for many related degree programs, students should meet with a counselor to determine specific course requirements for local CSUs/programs and to properly identify which CSUs are considered local.

To earn the Associate in Arts in Social Justice Studies for Transfer degree, student must:

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

Program Outcomes

Students who complete the Associate in Arts in Social Justice Studies for Transfer degree will be able to:

1. Identify and analyze historical and modern-day factors that contribute to social inequities in the United States and globally, especially those related to race, gender, and sexuality.
2. Demonstrate knowledge of the unique experiences and social, artistic, and intellectual contributions of key social groups studied.
3. Apply critical thinking and problem-solving skills to complex social issues related to equality, inclusion, and social justice.

REQUIRED COURSES ....**Units**
SJS 001 Introduction to Social Justice Studies.........................3
SJS 002 Introduction to Race and Ethnicity 3
PSYC 012 Introduction to Gender 3
3 courses from at least 2 of the 4 Areas 9-10

Area 1: History or Government
HIST 028 African American History to 1877 3
HIST 029 African American History Since 1865......................3
HIST 031 Mexican American/Chicano History 3
HIST 037 Women in American History..................................3
PLSC 005 Constitutional Rights in a Multicultural
    Society..3

Area 2: Arts and Humanities
Art 012 Inside/Outside: The Cultures and Identities of
    Diverse Visual Artists in the U.S. 3
CINA 011 American Cultures in Film.....................................3
ENGL 036 Multi-Ethnic Literature in America 3
MUSC 013 Multicultural Music in America 3

Area 3: Social Science
ANTH 002 Cultural Anthropology 3
CDFS 053 Teaching in a Diverse Society 3
COMM 012 Intercultural Communication..............................3
PSYC 007 Cross-Cultural Psychology.....................................3
PSYC 034 Human Sexual Behavior 3

Area 4: Quantitative Reasoning and Research Methods
MATH 011 Elementary Statistics 4

Required Major Total Units.. 18-19
CSU General Education or IGETC Pattern Units 37-39
CSU Transferable Electives (as needed to reach 60
    transferable units)*.. 14-24
    Total Degree Units...60

* 12-19 units may be double counted toward both the major area of emphasis and CSU General Education or IGETC Pattern. Consult with a counselor for more information on completing this degree.

Sociology

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

Program Description
Sociology is the study of society and human behavior. Students who obtain a degree in Sociology gain a fundamental understanding of culture, socialization, inequality, racial and ethnic relations, sex roles, deviance, social issues and problems, and the distribution of political and economic power. Sociology students prepare themselves for a job in the field of business, health, education, criminal justice, government/law, or social service, and a variety of other areas.

Associate in Arts in Sociology for Transfer
The Associate in Arts for Transfer (A.A.-T) in Sociology is intended for students who plan to complete a bachelor's degree in Sociology at a CSU campus. Students completing this degree (A.A.-T in Sociology) are guaranteed admission to the CSU system, but not to a particular campus or major.

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

Program Outcomes
Students who complete the Associate in Arts in Sociology for Transfer degree will be able to:
1. Become more aware of cultural, social, political, environmental, and economic forces within the world they live.
2. Raise their ethnic consciousness to a higher level of understanding and acceptance.
3. Build skills in critical thinking, reading and writing.
4. Improve skills cited above to provide an excellent base for transfer and success at four-year institutions.

REQUIRED COURSES .... **Units**
SOC 001 Introduction to Sociology.....................................3
SJS 002 Introduction to Race and Ethnicity 3
SOC 040 Sociology of the Family 3
Select two courses from List A 6-7
Select one course from List B 3
        Required Major Total Units 18-19

List A: (select two courses) .... **Units**
SOC 002 Social Issues and Problems 3
PSYC 004 Research Methods in Behavioral Science.........3
MATH 011 Elementary Statistics..4

List B: (select one course)..**Units**
SJS 030 Peace, Nonviolence and Conflict Resolution 3
SOC 045 Sociology of Religion 3
SOC 075 Introduction to Sociology of Sport......................3

CSU General Education or IGETC Pattern Units ... 37-39
CSU Transferable Electives (as needed to reach 60 transferable units)* **11-14**
        Total Degree Units.. 60

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

Sociology

SOC 040 Sociology of the Family   **3.0 Units**

Course Advisory: SOC 001; Eligibility for ENGL 001.
General Education: Option A: Area B2; Option B: Area 4; Option C:
*   Area D.*
Transferable to UC/CSU
Hours: 48-54 lecture.

A comparative cultural view of the family as an institution, the history of the family and its present role in our society with a special emphasis on kinship relations, sex roles, ethnic and economic variations of the family, and alternative family styles. (C-ID SOCI 130)

Program Outcomes

Studio Arts A.A.-T
1. Apply appropriate materials and techniques to solve creative problems.
2. Apply composition strategies to create visually unified and compositionally effective works of art.
3. Utilize appropriate language and approaches to create, analyze and critique conceptually effective works.

Automotive Automatic Transmissions and Transaxles Certificate of Achievement
1. Diagnose, remove, and repair automotive transmissions and transaxles
2. Utilize electrical diagnostic equipment and do hands-on testing with digital multi-meter
3. Safely work on and repair hybrid and alternative fuel vehicles

Automotive Electrical and Body Systems Certificate of Achievement
1. Understand the theory of air conditioning and heating systems and how to properly repair automotive HVAC systems
2. Utilize electrical diagnostic equipment and do hands-on testing with digital multi-meter
3. Safely work on and repair hybrid and alternative fuel vehicles

Automotive Maintenance and Light Repair Technician Certificate of Achievement
1. Demonstrate proficiency in diagnosing and repairing automotive steering and suspension systems
2. Use electrical diagnostic equipment and do hands-on testing with a digital multi-meter
3. Proficiently diagnose, service, and repair automotive brake systems
4. Safely work on and repair hybrid and alternative fuel vehicles

Automotive Technician A.S.
1. Demonstrate the ability to properly service and repair automotive engines, automatic and manual transmissions and transaxles.
2. Demonstrate the ability to properly service and repair automotive brakes, steering and suspension systems.
3. Demonstrate the ability to properly service and repair automotive electrical, engine performance, HVAC and hybrid/alternative fuel vehicles.
4. Demonstrate effective workplace skills including oral and written communication and proper disposal and handling of hazardous waste materials.

Communication Studies A.A.-T
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.

Drafting and Design Technician A.S. and Certificate of Achievement
1. Demonstrate proficiency at reading, drawing and dimensioning industry standard mechanical drawings.
2. Demonstrate proficiency at reading, drawing and dimensioning industry standard civil drawings.
3. Demonstrate proficiency at reading, drawing and dimensioning industry standard electronic drawings.
4. Demonstrate proficiency at reading, drawing and dimensioning industry standard architectural drawings.

Program Outcomes

Survey and Civil Drafting A.S. and Certificate of Achievement
1. Demonstrate proficiency using industry standard computer aided drafting/design CAD (AutoCAD) software program.
2. Demonstrate proficiency at reading, drawing and dimensioning industry standard civil drawings.
3. Demonstrate basic understanding in using industry standard survey equipment including Transit, Theodolite, and Level.

Maker Space Technology Certificate of Achievement
1. Demonstrate an understanding of the main principles of Mechatronics.
2. Demonstrate an ability to safely use a 3D printer, laser cutter, CNC machine, basic hand and power tools, and basic electronics.
3. Demonstrate and ability to create a CAD drawing and output to a Maker Space machine.

Fire Technology A.S. and Certificate of Achievement
1. Demonstrate the ability to analyze, appraise and evaluate fire and emergency incidents and identify components of emergency management and fire fighter safety.
2. Identify and comprehend laws, regulations, codes and standards that influence fire department operations, and identify regulatory and advisory organizations that create and mandate them, especially in the areas of fire prevention, building codes and ordinances, and firefighter health and safety.
3. Analyze the causes of fire; determine extinguishing agents and methods; differentiate the stages of the fire and fire development; and compare methods of heat transfer.
4. Identify and describe common types of building construction and conditions associated with structural collapse and fire fighter safety.

Human Services A.A. and Certificate of Achievement
1. Develop basic knowledge within the field of Human Services.
2. Develop cultural competence.
3. Develop group facilitation skills.
4. Develop case management skills.
5. Apply basic Human Services knowledge and skills in community settings.

Kinesiology A.A.-T
1. Identify major microscopic and gross structures of the major systems of the human body.
2. Describe normal physiological processes.
3. Describe the different sub disciplines of Kinesiology.
4. Describe the role of physical activity in daily life.
5. Explain the career options available to students graduating from departments of Kinesiology.

Music A.A.-T
1. Analyze and perform the elements of music (rhythm, melody, harmony and form) with technical facility and artistry as a soloist and as a member of an ensemble.
2. Analyze musical scores and compositions.
3. Critique personal music performances and those of other musicians.

Program Outcomes

Nursing, Registered A.S.
1. Synthesize principles of the nursing process and critical thinking to assist individuals, families and communities to achieve positive adaptation to change in health or a peaceful death.
2. Integrate technology and evidence-based concepts of nursing practice across the health care continuum to ensure quality patient centered care.
3. Educate patients, families, and communities in health promotion behaviors that increase health and wellness and decrease disease and illness in populations and communities

Nutrition and Dietetics A.S.-T
1. Explain the principles of nutrition and its effect on health and wellness.
2. Analyze a diet for adequacy, balance, and moderation.
3. Demonstrate an understanding of the relationships between chemistry, biology and nutrition.

2019-2020 Solano Community College General Education
Option A

In using this option for the General Education requirement students must complete:

1. A minimum of 21 units with at least 3 units from each Area A, B1, C, D1, D2, and E.
2. The Local District Requirement of Health and Kinesiology.

Note:

- If two courses are selected from the same Area to fulfill the 21 unit requirement, they must have a different course prefix. Exceptions: English and Mathematics.
- Courses with the same prefix as the student's major may not be used to fulfill general education requirements. Exceptions: ENGL 001 (Area D1) and Mathematics (Area D2).

21 GE Units (from this sheet) + Local District Req. + _____ Major Units (see SCC Degrees/Certificates) +_____ Elective Unit(s) (any course 001-199) = A minimum of 60 Units

AREA A – Natural Sciences			
Complete a minimum of 3 semester units	**C**	**IP**	**P**
Physical Science — **ASTR** 010, 030, 040 **CHEM** 001, 002, 003, 004, 010, 011, 012(formerly 051), 160 **ENGR** 030 **GEOG** 001 **GEOL** 001, 005 **PHSC** 012 **PHYS** 002, 004, 006, 007, 008, 010 Course from another college _____ AP Exam _____			
Biological Science — **ANTH** 001, 001L **BIO** 002, 003, 004, 005, 012, 014, 015, 016, 018, 019, 020, 025 Course from another college _____			
Other Natural Sciences — **HORT** 050 **NUTR** 010 Course from another college _____ AP Exam _____			

AREA B – Social and Behavioral Studies			
Complete a minimum of 3 semester units	**C**	**IP**	**P**
B1 — **HIST** 017, 018, 028, 029, 037* **IR** 001 **PLSC** 001, 004, 005*; SOC 002 Course from another college _____ AP Exam _____			
The following courses do not fulfill the Area B requirement, but may be used to meet the minimum 21 unit GE requirement	**C**	**IP**	**P**
B2 — **ANTH** 002, 007 **JOUR** 011 **CDFS** 038, 040, 050, 053*, 054, 070 **LR** 010 **COUN** 005, 015/055, 023/083, 058 **PLSC** 002, 003, 006, 016, 019, 048G **CJ** 001 **PSYC** 001, 002, 004, 005, 012, 020, 030 **ECON** 001, 002 **SOC** 001, 023 **GEOG** 002, 004, 006 **SOCS** 030 **HIST** 010, 031 Course from another college _____ AP Exam _____			

AREA C - Humanities			
Complete a minimum of 3 semester units	**C**	**IP**	**P**

		C	IP	P
C	**ART** 001, 002, 003A, B, 010, 011, 012*, 030B **PHOT** 035 **ASL** 001, 002 **PHIL** 003-005 **CINA** 010, 011* **SPAN** 001-004, 031-034 **COMM** 015 **THEA** 006, 010, 011, 013* **ENGL** 002, 018, 021, 023, 024, 030, 031, 040, 041, 044, 058 **FREN** 001-004 011, 031, 032 **TV** 050 **HIST** 002-005 **HUMN** 001-003* **MUSC** 005, 007-011, 013*-015, 017, 020, 021, 024-026 Course from another college _____ AP Exam _____			

AREA D – Language and Rationality			

		C	IP	P
Complete a minimum of 3 semester units from Each Area D1 and D2 **Totaling a minimum of 6 semester units**		C	IP	P
D1 Writing	**(must be completed with a minimum grade of C or a P if course is taken on a Pass/No Pass basis)** **ENGL** 001 Course from another college_____ AP Exam _____			
D2 Quantitative and Analytical Thinking	**(must be completed with a minimum grade of C or a P if course is taken on a Pass/No Pass basis)** **MATH** 002, 004, 011, 012, 020, 021, 022, 023, 030, 031, 040, 051, 104, 112 Course from another college _____ AP Exam _____			
	The following courses do not fulfill the Area D requirement, **but may be used to meet the minimum 21 unit GE requirement**	C	IP	P
D3	**COMM** 001, 002, 006, 010, 060 **LR** 010; **CIS** 001, 020, 023 **PHIL** 001 **ENGL** 004			

AREA E – Cross-Cultural Studies			

		C	IP	P
E	**ART** 012* **COUN** 015* **HUMN** 003* **PSYC** 007 **CDFS** 053* **ENGL** 036 **MUSC** 013* **SJS** 002 **CINA** 011* **HIST** 037* **PLSC** 005* **THEA** 013* **COMM** 012			

Local District Requirement – Health and Kinesiology			

		C	IP	P

Options	A. Two **KINE** or **DANC** activity courses: _____ , _____
	B. Two **ATHL/Intercollegiate Sport** courses: _____ , _____
	C. One **KINE** or **DANC** activity course and one **ATHL/Intercollegiate Sport** course:
	_____ , _____
	D. **DD214** (military experience)
	E. One of the following courses:
	      HED 002, 003
	      KINE 020A, 020V, 020W, 057			

C=COMPLETED IP = IN PROGRESS P= PLANNED
*=MAY ONLY BE USED IN ONE AREA

2019-2020 Intersegmental General Education Transfer Curriculum (IGETC) – Option B

The Intersegmental General Education Transfer Curriculum (IGETC) is a series of courses that allows community college transfer students to fulfill lower-division general education requirements either at the UC or the CSU system. The IGETC pattern is most useful for students who want to keep their options open before making a final decision about transferring to a particular UC or CSU campus. Completion of IGETC does not guarantee admission, nor is it generally required for admission. IGETC is not appropriate for some majors. A Transfer Studies Certificate of Achievement may be achieved upon successful completion of the IGETC Pattern. Please see a counselor for additional information and guidance.

Note: All courses used for IGETC must be completed with a minimum grade of C and must be IGETC approved at the time the course is completed.

___ GE Units (this sheet) + ___ Major Units (see www.assist.org) +___ Elective Unit(s) (courses 001-049 UC, courses 001-099 CSU) =
60 Units required

AREA 1 – English Composition				
Each course must be at least 3 semester units **CSU – complete one course from each 1A, 1B, and 1C** **UC – complete one course from 1A and 1B**		**C**	**IP**	**P**
1A	**English Composition: ENGL** 001 　Course from another college _____ AP Exam _____			
1B	**Critical Thinking: ENGL** 002, 004; 　Course from another college_____			
1C (CSU Only)	**Oral Communication: COMM** 001, 002, 006 　Course from another college _____ AP Exam _____			
AREA 2 – Mathematical Concepts and Quantitative Reasoning				
Complete 1 course of at least 3 semester units		**C**	**IP**	**P**
2	**CIS** 021 **MATH** 002+, 004+, 011, 012, 020+, 021+, 022+, 023, 030+, 031+, 040 　Course from another college_____ AP Exam _____ IB _____			
AREA 3 – Arts and Humanities				
Complete 3 courses of at least 3 semester units each totaling a minimum of 9 semester units **A minimum of 1 course from each 3A and 3B**		**C**	**IP**	**P**
3A Arts	**ART** 001, 002, 003A, 003B, 010, 011, 012, 030B, 030C **CINA** 010, 011 **DANC** 004 **MUSC** 005+, 007, 008, 013 **PHOT** 035 **THEA** 006, 009, 010, 011, 013 　Course from another college_____ AP Exam _____ IB _____			
3B Humanities	**ASL** 005 **DANC** 004 **ENGL** 018, 021, 023, 024, 030, 031, 036, 040, 041, 044 **FREN** 002, 003, 004, 011, 012 **HIST** 002*,003*, 004*, 005*, 010*, 017*, 018*, 028*, 029*, 031*, 037* **HUMN** 001, 002, 003 **PHIL** 003, 004, 006*　　**PLSC** 006* **SPAN** 002+, 003, 004, 011, 033+, 034+ 　Course from another college_____ AP Exam _____ IB _____			

C = Completed IP = In Progress   P = Planned (L) = Lab course
* May be used in only one area 3B or 4.
+ Indicates that transfer credit may be limited by either UC or CSU or both.

AREA 4 – Social and Behavioral Sciences			
Complete 3 courses of at least 3 semester units each from at least 2 different disciplines **Totaling a minimum of 9 semester units**	**C**	**IP**	**P**
4 — **ANTH** 002, 007 **IR** 001(for Fall 19 only) **CDFS** 038, 040 **JOUR** 011 **COMM** 012 **PHIL** 006* **COUN** 015, 023 **PLSC** 001, 002, 003, 004, 005, 006*, 007(begins Spr 20) 016, 019 **CJ** 001 **PSYC** 001+, 002, 004, 005, 006, 007, 012, 020, 030, 034 **ECON** 001, 002, 010 **SJS** 001, 002, 030(formerly SOCS 030) **GEOG** 002, 004, 006 **SOC** 001, 002, 023, 040, 045 **HIST** 002*, 003*, 004*, 005*, 010*, 017*, 018*, 028*, 029*, 031*, 037* Course from another college_____ AP Exam_____			

AREA 5 – Physical and Biological Sciences			
Complete 2 courses of at least 3 semester units each totaling 7-9 semester units **1 course from each 5A and 5B; one of which must include a lab** **5C may be used to complete the lab requirement; the corresponding lecture course must be completed prior to or concurrently with the lab course**	**C**	**IP**	**P**
5A Physical Science — **ASTR** 010, 030+, 040+, 045 **GEOL** 001, 005 **CHEM** 001(L), 002(L), 003(L), 004(L), 010(L)+, 011(L)+ 12(L), 20 **ENGR** 045(L) **PHYS** 002(L)+, 004(L)+, 006(L)+, 007(L)+, 008(L)+, 010+ **GEOG** 001 **PHSC** 012(L)+ Course from another college_____ AP Exam_____ IB w/o lab_____			
5B Biological Science — **ANTH** 001 **BIOT** 001 **BIO** 002(L), 003(L), 004(L)+, 005(L)+, 012, 014(L), 015(L)+, 016+, 018, 019(L), 020, 025 Course from another college_____ AP Exam_____ IB w/o lab_____			
5C Lab (if not met in 5A or 5B) — **ANTH** 001L **BIO** 012L+, 016L+ **GEOL** 002 **ASTR** 020 **CHEM** 020L **GEOG** 001L Course from another college_____ AP Exam_____			

AREA 6 – Language Other Than English (UC Requirement Only)			
Proficiency equivalent to 2 years of high school courses in the same language, **or complete 1 course from Area 6**	**C**	**IP**	**P**
6 — **ASL** 001, 002, 003, 004 **SPAN** 001, 002+, 003, 004, 011, 032, 033+, 034+ **FREN** 001, 002 003, 004, 032 Completed in high school_____ Course from another college_____ AP Exam_____ Foreign high school_____			

CSU Graduation Requirement in American Institutions			
(Not part of IGETC, may be completed prior to transfer)			
Complete 1 course from each CSU 1 and CSU 2 **Courses may also be used in Area 3B and/or 4**	**C**	**IP**	**P**
CSU 1 — **PLSC** 001, 005			
CSU 2 — **HIST** 017, 018, 028, 029, 037			

SCC Cross-Cultural Graduation Requirement			
(Exempt if earning an AA-T or AS-T)			
Complete 1 course, which may be used in one other Area	**C**	**IP**	**P**
SCC — **ART** 012 **ENGL** 036 **PLSC** 005 **SJS** 002 **CINA** 011 **HIST** 037 **PSYC** 007 **COMM** 012 **HUMN** 003 **THEA** 013 **CDFS** 053 **COUN** 015 **MUSC** 013			

C = Completed IP = In Progress   P = Planned (L) = Lab course

* May be used in only one area 3B or 4.

+ Indicates that transfer credit may be limited by either UC or CSU or both.

2019-2020 California State University
General Education Breadth (CSU GE) – Option C

The General Education Requirements for the California State University (CSU) system specifies courses within subject areas which will satisfy the 39 lower division GE requirements for any campus of the California State University system. A Transfer Studies Certificate of Achievement may be achieved upon successful completion of the CSU Pattern. Please see a counselor for additional information and guidance.

_____ GE Units (This sheet) + _____ Major Units (www.assist.org) + ____ Elective Unit(s) (any course 001-099) = 60 Units required

AREA A – English Language Communication and Critical Thinking			
Complete 1 course from each A1, A2, and A3. **A minimum of 9 semester units are required and must be completed with a minimum grade of C.**	**C**	**IP**	**P**
A1 — **Oral Communication: COMM** 001, 002, 006* Course from another college _____			
A2 — **Writing Communication: ENGL** 001 Course from another college _____ AP Exam _____			
A3 — **Critical Thinking: COMM** 002, 006* **PHIL** 001, 005 **ENGL** 002, 004; Course from another college _____			

AREA B – Scientific Inquiry and Quantitative Reasoning			
Complete 3 courses of at least 3 semester units each totaling 9 semester units **1 course from each B1, B2, and B4; one of which must include a lab.** **B3 may be used to complete the lab requirement**	**C**	**IP**	**P**
B1 Physical Science — **ASTR** 010, 030, 040 **GEOL** 001, 005; 010; **CHEM** 001(L), 002(L), 003(L), 004(L), 010(L), 011(L), 012(L), 020 **ENGR** 045(L) **PHYS** 002 (L), 004(L), 006(L), 007(L), 008(L), 010 **GEOG** 001, 010 **PHSC** 012(L) Course from another college_____ AP Exam _____ IB _____			
B2 Life Science — **ANTH** 001 **ASTR** 045 **BIOT** 001 **PHYS** 002(L) **BIO** 002(L), 003(L), 004(L), 005(L), 012, 014(L), 015(L), 016, 018*, 019(L), 020, 025 Course from another college_____ AP Exam _____ IB _____			
B3 Lab (if not met in B1 or B2) — **ANTH** 001L **BIO** 012L, 016L **GEOG** 001L **GEOL** 002 **ASTR** 020 **CHEM** 020(L) **ENGR** 045 Course from another college_____ AP Exam _____ IB _____			
B4 Mathematics — (must be completed with a minimum grade of C) **MATH** 002, 004, 011, 012, 020, 021, 022, 023, 030, 031, 040, 049, 051, 055 Course from another college_____ AP Exam _____ IB _____			

AREA C – Arts and Humanities			
Complete 3 courses of at least 3 semester units each totaling a minimum of 9 semester units **A minimum of 1 course from each C1 and C2**	**C**	**IP**	**P**
C1 Arts — **ART** 001, 002, 003A, 003B, 010, 011, 012, 030B, 030C **PHOT** 031, 035 **CINA** 010, 011 **DANC** 004, 004N **MUSC** 005, 007, 008, 013 **THEA** 001, 002, 005, 006, 009, 010, 011, 013 Course from another college_____ AP Exam _____ IB _____			
C2 Humanities — **ASL** 001, 005, 006 **PHIL** 003, 004 **ENGL** 006, 007, 018, 021, 023, 024, 030, 031, 036, 040, 041, 044, 058 **FREN** 001, 002, 003, 004, 011, 012, 031, 032 **HIST** 002+, 003*, 004*, 005*, 010*, 017*#, 018*#, 028*#, 029*#, 031*, 037*# **HUMN** 001, 002, 003 **SPAN** 001, 002, 003, 004, 011, 031, 032, 033, 034 Course from another college_____ AP Exam _____ IB _____			

C = Completed IP = In Progress P = Planned (L) = Lab course
* May be used in only one area.   **#** Meets American Institution requirement.   Updated: 9/25/19

AREA D – Social Sciences			
Complete 3 courses of at least 3 semester units each from at least 2 different disciplines **Totaling a minimum of 9 semester units**	**C**	**IP**	**P**
D	**ANTH** 002, 007　　　　**CDFS** 038, 040, 050, 053, 070 **COMM** 012　　　　**CJ** 001 **COUN** 015, 023　　　　**ECON** 001, 002, 010 **GEOG** 002, 004, 006　　**HIST** 002, 003, 004, 005, 010, 017, 018, 028, 029, 031, 037 **HS** 051(changes to 001-Spring 20)　　　　**IR** 001 (Fall 19 only) **JOUR** 011　　　　**KINE** 020J **PHIL** 006　　　**PLSC** 001, 002, 003, 004, 005, 006, 007 (begins Spr 20), 016, 019 **PSYC** 001, 002, 004, 005, 006, 007, 012, 020, 030, 034; **SJS** 001**,**002, 030 (formerly SOCS 030)　　**SOC** 001, 002, 023, 040, 045, 075 **TV** 050 Course from another college_____ AP Exam _____ IB _____			

AREA E – Lifelong Learning and Self Development			
Complete 3 semester units with no more than 1 unit of physical activity	**C**	**IP**	**P**
E	**ATHL** 001,001A,B, 002A-E, 003,003A,B, 004A,B, 010, 010A, 015, 015A,B, 016A,B,　　　022, 022A,B, 025 **BIO** 018* **CDFS** 038*, 040, 050, 054, 070 **COUN** 005, 058, 098 **DANC** 004A-D,F,H,J,K,M,N,P,S,T **HED** 002, 003 **KINE** 002A,B,D, 003A,D, 005C-E,J,K,M,N,Q-S, 006A,C,E,F, 007D,E,F,G, 008A, B,D-F,　　　009A-C,E-H,P, 020D,E,J,M,N,P-R,V-Y, 078 **NUTR** 010, 054 **PSYC** 006, 020, 034 **DD214**-Military Experience Course from another college_____			

CSU Graduation Requirement in American Institutions				
(may be completed prior to transfer)				
Complete 1 course from each CSU 1 and CSU 2 **Courses may also be used in Area C2 and/or D**		**C**	**IP**	**P**
CSU 1	**PLSC** 001, 005				
CSU 2	**HIST** 017, 018, 028, 029, 037				

SCC Cross-Cultural Graduation Requirement					
(Exempt if earning an AA-T or AS-T)					
Complete 1 course which may be used in one other Area			**C**	**IP**	**P**
SCC	**ART** 012 **CINA** 011 **COMM** 012 **COUN** 015	**CDFS** 053 **HIST** 037 **HUMN** 003 **MUSC** 013	**ENGL** 036 **PSYC** 007 **THEA** 013 **SJS** 002	**PLSC** 005		

C = Completed IP = In Progress P = Planned (L) = Lab course

* May be used in only one area.   # Meets American Institution requirement.　　　　Updated: 9/25/19

Page # Catalog	Page # Addendum	Course/Program/Heading	In Printed 2018-2019 Catalog	Spring 2019 Addendum
39	2	Admissions and Registration	--	Transportation Fees
--	3	Advanced Manufacturing	--	New Certificate of Achievement and Associate in Science Degree in Automation Technology
--	4	Advanced Manufacturing	--	New Certificate of Achievement in Maintenance Technician
84	5	Advanced Manufacturing	Units (39-40)	Update to Program Description, Program Outcomes, courses and units (36-37).
86	6	Advanced Manufacturing – Industrial Technology – IT 175	Prerequisite: A minimum grade of C in IT 171, IT 172, IT 173, and IT 174; DRFT 045 or DRFT 145 with a minimum grade of C or may be taken concurrently; DRFT 058 or DRFT 151 with a minimum grade of C or may be take concurrently	IT 175 – Prerequisite: IT 171, IT 172, IT 173, and IT 174 with a minimum grade of C.
--	6	Advanced Manufacturing – Industrial Technology	--	New Courses: IT 181 Introduction to Drones IT 182 Basic Drone Operations IT 183 Drone Photography and Video IT 184 Remote Pilot Exam Prep
--	7	American Sign Language	--	New Courses: ASL 055 Interpreting 1: Consecutive Interpreting ASL 056 Interpreting 2: Simultaneous Interpreting
102	45	Art: Associate in Arts in Studio Arts for Transfer	--	Program Learning Outcome Update
118-121	45	Automotive: Automotive Technician, Automotive Automatic Transmissions and Transaxles, Automotive Electrical and Body Systems, and Automotive Maintenance and Light Repair	--	Program Learning Outcome Update
--	8	Automotive	--	New Courses: ATEC 150 Automotive Data Acquisition ATEC 151 Automotive Parts and Service
128	8	Biology	(C-ID-BIOL 120)	(C-ID-BIOL 120B)
--	9	Biology	--	New Certificate of Achievement and Associate in Science in Biomedical Science
--	10	Biotechnology	--	New Certificate of Achievement in Stem Cells and Cell-Based Technologies
--	11	Biotechnology	--	New Courses: BIOT 060 Mammalian Cell Culture BIOT 061 Stem Cells and Cell Based Technologies
151	12	Chemistry	Units 60-63 *6 units may be double counted…	Units 60-62 *7 units may be double counted…
151	12	Chemistry: CHEM 001	Prerequisite:…Math 104 with a minimum grade of C or MATH 002 by a counselor or math instructor based on a Multiple Measures Evaluation.	Prerequisite:…MATH 104 with a minimum grade of C or eligibility for MATH 002 by a Multiple Measures Evaluation. And addition of (CHEM 001 = C-ID CHEM 110)
152	13	Chemistry: CHEM 010	Requisite change	Prerequisite: Recommendation of MATH 104 based on a Multiple Measures Evaluation.
152	13	Chemistry: CHEM 012	Requisite change	Prerequisite:…Recommendation of MATH 104 based on a Multiple Measures Evaluation
152	13	Chemistry: CHEM 020	Requisite change	Prerequisite:…MATH 330 with a minimum grade of C or recommendation based on a Multiple Measures Evaluation.
158	13	Child Development and Family Studies: 052	Prerequisite: CDFS 038	Course Advisory: CDFS 038
159	13	Child Development and Family Studies: CDFS 063	Prerequisite: 062 with a minimum grade of C.	Prerequisite: 038 with a minimum grade of C.
163	45	Communication Studies: Associate in Arts in Communication Studies fro Transfer	--	Program Learning Outcome Update
--	15	Computer Information Science	--	New Associate in Science for Transfer in Computer Science
170	16	Computer Information Science: Computer Applications Specialist Job-Direct Low Unit Certificate	BUS 100 Work Readiness	BUS 097 Work Readiness
--	16	Computer Information Science	--	New Job-Direct Low Unit Certificate in Motion Graphic Editor

--	16	Computer Information Science	--	New Job-Direct Low Unit Certificate in Digital and Print Publishing
181	17	Counseling: COUN 062	Course Advisory: COUN 083' Eligibility for ENGL 001 and SCC minimum English standard	Course Advisory: SCC minimum English standard
187	18	Criminal Justice: Criminal Justice, Corrections	--	Update to Program Outcomes and remove CJ 091 Vocational Work Experience - Corrections
188	19	Criminal Justice: Criminal Justice, Law Enforcement	--	Update to Program Outcomes and remove CJ 091 Vocational Work Experience - Corrections
191	20	Dance	--	New Associate in Arts Degree in Dance
194	21	Drafting: Computer Aided Drafting (CAD) Technician Job-Direct Low Unit Certificate	--	Addition of DRFT 140 Surveying…3 units to Required Courses
192, 193, 195	43-44	Drafting: Drafting and Design Technician A.S. and Certificate of Achievement, Survey and Civil Drafting A.S. and Certificate of Achievement, Makerspace Technology Certificate of Achievement	--	Program Learning Outcome Update
	22-23	Education	Associate in Arts in Elementary Teacher Education for Transfer	New
203	24	Engineering	--	Addition of an option in List A between DRFT 045 Introduction to Computer-Aided Drafting (CAD) or DRFT 058 Solid Modeling with Solidworks
204	25	Engineering: ENGR 001 Introduction to Engineering	1.0 unit	2.0 units
--	25	Engineering	--	New course: ENGR 003 Introduction to Ethics in Engineering
218	46	Fire Technology A.S. and Certificate of Achievement	--	Program Learning Outcome Update
224	26	Foreign Languages, General	--	Course Modifications
225	27-28	Foreign Languages, Individual	--	Course Modifications
243	46	Human Services A.A. and Certificate of Achievement	--	Program Learning Outcome Update
244	29	Human Services – change in course number	HS 051 Introduction to Human Services	HS 001 Introduction to Human Services
245	30	Interdisciplinary Studies: Science and Quantitative Reasoning	Change in subheading: Self-Development	Quantitative Reasoning
247	37	International Relations	IR 001 Global Interdependence	PLSC 007 International Relations
254	45	Kinesiology: Associate in Arts in Kinesiology for Transfer	--	Program Learning Outcome Update
--	31	Kinesiology: Athletics	--	New course: ATHL 012 Women's Intercollegiate Beach Volleyball
266	31	Kinesiology	Title: Core Conditioning Training	Title: Functional & Core Training
--	31	Kinesiology: Sports Medicine	--	New courses: SPMD 056A Sports Medicine-Athletic Training Practicum Fall Sports 2 SPMD 056B Sports Medicine-Athletic Training Practicum Spring Sports 2
283	32	Mathematics	Course Modifications	MATH 030 Business Calculus I MATH 031 Business Calculus II
288	46	Music: Associate in Arts in Music for Transfer	--	Program Learning Outcome Update
294	33	Music: MUSC 036B Intermediate Voice II	1.5 units	1.0 unit
296	33	Music: MUSC 042B Jazz and Pop Piano	1.5 units	1.0 unit
300	47	Nursing: Nursing, Registered A.S.	--	Program Learning Outcome Update
311	47	Associate in Science in Nutrition for Transfer	--	Program Learning Outcome Update
318	--	Office Technology	Medical Office and Coding Specialist A.S.	Inactivated and Removed from Catalog
318	--	Office Technology	Medical Office and Coding Specialist Certificate of Achievement	Inactivated and Removed from Catalog
325	34	Photography – change in course number and Title	PHOT 071 Digital Imaging I	PHOT 032 Digital Imaging
--	34	Photography	--	New course: PHOT 158 Photo Illustration
--	35	Physical Science	--	New Associate in Science in Physical Science
333	36	Political Science: Associate in Arts in Political Science for Transfer	--	Change in courses
337	38	Psychology: Associate in Arts in Psychology for Transfer	PSYC 012 Gender	PSYC 012 Introduction to Gender

338	39	Psychology	PSYC 012 Gender	PSYC 012 Introduction to Gender
			HS 051 Introduction to Human Services	HS 001 Introduction to Human Services
339	40	Psychology: PSYC 012	PSYC 012 Gender	PSYC 012 Introduction to Gender
342	41	Real Estate: RE 172	--	Removed the word continuing from description
345	42	Social Justice/Ethnic Studies: Associate in Arts in Social Justice Studies for Transfer	PSYC 012 Gender	PSYC 012 Introduction to Gender
349	43	Sociology: Associate in Arts in Sociology for Transfer	--	Update to courses
351	44	Sociology: SOC 040		Update to Description and addition of (C-ID SOCI 130)